IT Mentor John Kost says the attitudes, organization and culture at many companies set up the CIO to fail. Is yours one of them? Take this test to gauge your chances of success.

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Users Push Microsoft To Extend VB6 Support

Visual Basic developers sign online petition; some users cite complexity of migrating apps

BY CAROL SLIWA

Hundreds of users with heavy investments in Visual Basic 6 code last week urged Microsoft Corp. to reconsider its 3-year-old decision to end mainstream support for the development environment at the end of the month.

ONLINE
To read the VB6 petition, go to our Web site.
Quicklink: a58000

More than 1,300 IT professionals and developers — including over 200 "Most Valuable Professionals," whom Microsoft has honored for their contributions to online and off-line technical communities — signed an online petition calling on the vendor to continue support for the core Visual Basic language for an unspecified period.

The petition also asks Microsoft to further develop VB6 and the Visual Basic for Applications companion tool and suggests that Microsoft include an updated version with its Visual Studio development suite.

"There's nothing so far that I've run into that I can't do with VB6. So there's no incentive to go anywhere else," said

VB6 Support, page 57

HP Struggles With Second SAP Project

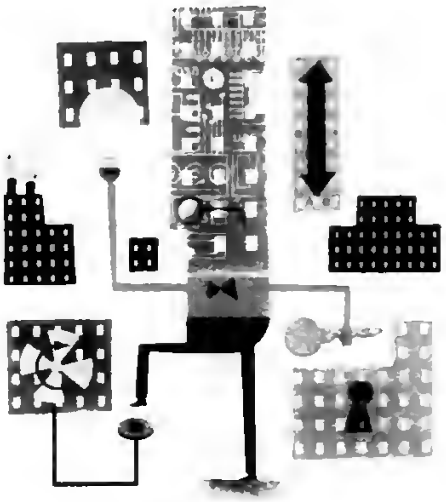
Hasty rollout plan sets back spare-parts unit

BY MARC L. SONGINI

After suffering a major black eye last summer from a poorly executed migration to SAP AG's ERP software in its server division, Hewlett-Packard Co. is working to turn around another problematic SAP installation whose schedule has been stretched by two years.

The latest difficulties — blamed primarily on a lack of adequate internal processes — are being encountered at HP's Global Supply Operations unit, which provides spare

SAP at HP, page 57



RISE OF SMART BUILDINGS

Heating and lighting may not sound like IT functions, but with the help of IP, Web services and other technologies, building-automation systems are rapidly converging with traditional IT infrastructure. **Page 25**

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IT Strives for Credibility With Corporate Execs

Efforts to stabilize systems, rein in tech costs are crucial to business alignment

BY JAIKUMAR VIJAYAN
PHOENIX

INFORMATION technology organizations that want a bigger role in enabling new business initiatives first need to ensure that their own operations are stable and cost-efficient, according to speakers and other attendees at Computerworld's Premier 100 IT Leaders Conference here last week.

Otherwise, IT departments simply won't have the credibility needed to influence business-related changes within their companies, said IT executives such as John Moon, CIO at Baxter International Inc. in Deerfield, Ill.

Getting IT's own house in order is "the price of entry" for being invited to participate in projects where technology has a chance to add real business value, Moon said during a presentation at the conference, which was attended by 551 IT and business managers.

Over the past few years, Baxter, a $9.5 billion maker of medical products, has been using IT to innovate and deliver new services and technologies to its customers, Moon said. For instance, the company's IT organization has developed in-house software that lets its dialysis machines and other medical devices share information with clinical applications and electronic health records systems.

"Making our devices smarter and more connected is not traditional IT work," Moon said. But that hasn't diluted the traditional focus on trimming IT costs and delivering automated services that can improve operational efficiencies within Baxter, he added. Moon noted that IT has reduced its operating budget by 15% over the past two years, to about $30 million.

'People Programs'

A similar focus on IT cost controls and "people programs" has helped Nordstrom Inc.'s IT organization assume more of a front-end, business-enabler role, said Bill Tucker, divisional vice president of systems delivery at the Seattle-based retailer.

"Three to four years ago, we were back-of-the-house technologists," Tucker said. "There were very few invitations to discuss business problems." Since then, IT has become involved in almost every aspect of Nordstrom's business, from the way the company manages inventory to its Personal Touch in-store shopping service, he said.

Much of the increased influence has to do with the IT unit's focus on meeting its cost-containment commitments and doing a better job of understanding business requirements, Tucker said. For instance, IT staffers have been embedded at several stores to get a direct understanding of how technology can help add value to business operations.

In an era of global commerce and round-the-clock operations, IT needs to become "much more professionalized," said Charlie Feld, executive vice president of IT services portfolio management at Electronic Data Systems Corp. "People believe that if you put money into a manufacturing or engineering project, it's going to happen," Feld, the longtime CIO at Delta Air Lines Inc., said during his opening keynote speech. "Most executive teams feel more like IT is an art, and if you put money into a project, maybe something will come out on the other side."

To be trusted by corporate executives and business managers, "you have to have fixed all of your problems," said André Mendes, chief technology integration officer at Public Broadcasting Service in Alexandria, Va. Gaining a good reputation internally

IT Leaders See Need to Be on Par With CFOs

PHOENIX

To optimally align IT with business requirements, companies need to have an organizational structure in which the CIO reports directly to the CEO, several attendees said at the Premier 100 conference.

Organizations whose CIOs report to their chief financial officers are taking an "anachronistic" approach, said André Mendes, chief technology integration officer at PBS.

"It's an artifact from the days when IT was still in its infancy," Mendes said, noting that technology managers were initially involved purely with data processing jobs aimed at improving efficiencies and cutting costs.

In the health care industry, having CIOs report to CFOs stopped making sense when hospitals began automating their clinical operations, said Dennis L'Heureux, CIO at Rockford Health System in Rockford, Ill.

Putting IT executives on par with CFOs "neutralizes the perception that the only time we invested in systems was when we were doing projects for the finance department," he said during a panel discussion on the relationship between CIOs and CFOs.

A more equal relationship between the technology, business

SOUND BITES

■ BETTE WALKER, CIO, Delphi Corp.

"You can't over communicate [with your IT staff] enough, and that doesn't mean e-mails – so get off it. That means talking face-to-face with people."

■ HOSSEIN ESLAMBOLCHI, CIO and chief technology officer, AT&T Corp.

"People always say that if it ain't broke, don't fix it. We have a philosophy at AT&T now that if it ain't broke, it doesn't have enough features."

100 IT LEADERS 2005

and finance groups also fosters a better understanding of mutual goals, said Lynne Ellyn, CIO at DTE Energy Co. in Detroit.

For instance, DTE has developed a quarterly project-prioritization process under which its IT team vets proposed initiatives with department-level financial managers before passing them along to CFO David Meador. The process is better than the "haphazard manner" in which projects were funded previously, Ellyn said.

That doesn't mean Ellyn and Meador always see eye to eye on IT investments. But Meador said the two executives "have spent a lot of time talking about values and relationships, and that has made the technology and budget issues easier to manage."

Even though L'Heureux doesn't report to Rockford Health CFO Sue Petru, he makes sure he's well prepared for meetings with her. "I think that if I come in with numbers, Sue likes it," he said.

And on those occasions when L'Heureux loses an IT-related argument to Petru, he gets with the program. For instance, Rockford Health recently signed a contract with an application service provider for a new clinical system – a decision that was opposed by L'Heureux, who wanted to upgrade an existing application running internally. "But once that decision's made, I'm a team player, and I'm supporting it," he said.

– Jaikumar Vijayan

won't happen "if the only time you get to meet the CEO is because your e-mail [system] went down," he added.

Over the past seven years, PBS has reduced IT complexity and slashed its hardware footprint by 80%, largely as a result of technology standardization, according to Mendes. It has also reduced its IT staff by 45%. Meanwhile, overall system availability has increased from 99.91% in 2001 to 99.992%, he said.

A similar focus on improving efficiencies through centralization and consolidation has given the 1,100-person IT organization at Southern California Edison Co. a lot more clout internally, said Mike Pinter, director of infrastructure services at the Rosemead, Calif.-based electric utility.

"We are out of [being] the order-taking business that didn't deliver on time," Pinter said. Instead, the IT group is leading much of the process as Southern California Edison tries to overhaul its aging transmission infrastructure, he said. **53117**

■ **LYNNE ELLYN,**
CIO, DTE Energy Co.

"I think people who know me would say that you'd probably have to do a frontal lobotomy to turn me into a person who just says yes [to the CFO]."

■ **RON PONDER,**
CIO, WellPoint Inc.

"I've been told that being the CIO of a large company is a little bit like being the caretaker of a large cemetery. You have a lot of people underneath you, but not many of them are listening."

CIOs Need Tech Savvy and Business 'Street Smarts'

PHOENIX

Attendees at the Premier 100 conference said IT executives whose companies face increasing competitive pressures and the continuing need to modernize systems had better be prepared to do some selling – internally, that is.

For many CIOs and their staffs, the one-two punch of nimble rivals and rigid systems is posing "huge, huge leadership challenges" that go well beyond the realm of managing technology, according to Charlie Feld, executive vice president of IT services portfolio management at EDS.

Feld said during his keynote speech here that CIOs need technical savvy in order to avoid fads and recognize developing IT patterns. But they also must have the ability to set the technology agenda at the executive-committee level, as well as enough "street smarts" to sell their ideas internally, he added.

And he warned that for many IT managers, time is of the essence because of the quarter-to-quarter pressure that their companies face to produce good financial results. "In every industry, there's a Dell, there's a Wal-Mart, there's a Costco that's showing up," Feld said. "A lot of the [older] companies don't have a lot of time to get things done."

Conference attendee Keith Bearden said CIOs have to convince business managers that viewing IT as a cost center is too limiting. "I look at the job of a CIO, and you're selling every day," he said. "It's just that you're selling in a different way" than a salesman is.

Bearden is a former corporate IT executive who now works as a CIO partner at Tatum Partners, an Atlanta-based consulting and professional services firm. He added that IT managers "have to know the business that you work within as well as you know your own business. And if they don't have a good business strategy in place, you've got to help them get one."

Feld's message about the need to have corporate street smarts also resonated with Yuri Aguiar, chief technology officer at Ogilvy & Mather Worldwide in New York.

Over the past few years, IT within Ogilvy & Mather "has gone from the back office to surely being a boardroom issue," Aguiar said. He noted that the advertising and public relations firm recently expanded its list of corporate principles to include the use of IT to drive business operations.

For IT managers, that kind of prioritization requires more than technical know-how, Aguiar said. "It's one thing to have academic smarts. But when it comes to convincing everybody[of where to go on IT], you really need to be on both sides of the aisle," he said.

Matthew Carey, CIO for the Cabazon Band of Mission Indians, which operates the Fantasy Springs Resort Casino in Indio, Calif., began his career as a hotel manager before shifting to IT. He said it helps to have corporate executives with some grounding in technology, adding that within the past year, Fantasy Springs hired a CEO who is technically savvy.

"We can directly affect the bottom line, whether it's through system outages or bringing in enhanced technology," Carey said. "Fortunately, our CEO understands the relationship and the impact that IT has on the business."

For companies that haven't meshed IT and business together, "that gap really needs to close pretty quickly into one dialogue," Feld said, adding that technology itself isn't the hard part of the equation. "Everybody can buy violins and cellos," he said. "But how many people can make great music out of them?"

– Craig Stedman

Global IT Managers Push To Build 'Blended Culture'

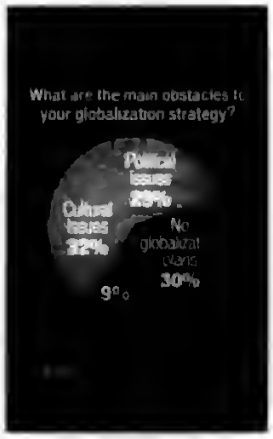
BY PATRICK THIBODEAU
PHOENIX

To succeed in globalizing IT, companies must build a workforce that understands and can adapt to the business needs and cultural expectations of co-workers no matter where they're located, according to IT executives from several large companies with operations around the world.

What such enterprises need is "a blended culture [that] allows everybody to work with everybody else," said John Parkinson, vice president and chief technologist at Paris-based Capgemini. Parkinson took part in a panel discussion that focused on the written and unwritten rules of globalization at *Computerworld*'s Premier 100 IT Leaders Conference here last week.

At Franklin Templeton Investments, developing global working relationships means giving employees the chance to travel to other countries and work side by side with the IT staffers there, said Sandeep Bhatia, director of global customer technology at the San Mateo, Calif.-based company.

The interaction helps the so-called global ambassadors gain a better understanding of business processes in different regions and of their fellow


What are the main obstacles to your globalization strategy?
Political issues 29%
Cultural issues 32%
No globalization plans 30%
9%

workers, Bhatia said. "Unless people go and live there and understand each other, it just doesn't happen," he added.

Sometimes simple things can send a message "that you are trying to behave like a global organization," such as being cognizant of local times when scheduling conference calls, said Sherry Aaholm, senior vice president of express and freight solutions at FedEx Corp.'s FedEx Services unit.

In an electronic poll of the audience, a combined 61% of the 224 respondents said cultural and political issues are the main obstacles to their IT globalization strategies (see chart). The panelists seconded the poll results with anecdotes of their own experiences.

For example, they said regulatory issues can pose big challenges — even within a single country. In Canada, for instance, the government of Quebec requires that software be bilingual in some cases, Aaholm noted. She said companies need strong human resources and legal staffs to work with IT project teams on complying with local regulations.

While different regulations can add to business costs, local customs and practices can create outright confusion, according to the panel members.

In the U.S., "we say what we mean," Bhatia said. But in other parts of the world, such as Asia, even a word as seemingly simple as "no" can mean a lot of things, he noted.

"The world is full of little minefields," Parkinson said. For instance, in some cultures, it's impolite to talk to someone before being formally introduced. One element of Capgemini's IT program manager training "is to put people together, videotape them and show them how they're offending each other," he said.

With half of its IT staffers working in countries where they aren't citizens, Capgemini also has to spend a lot of time on "people security," Parkinson said. "We had to put in a whole layer of security that, frankly, we didn't have to worry about a decade ago." 53119

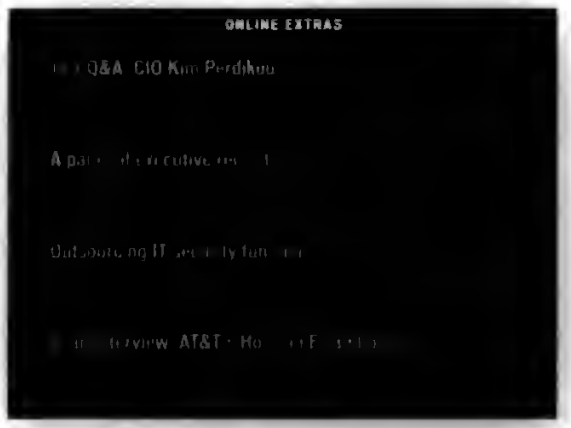
SOUND BITES

■ **PAUL HIGDAY,** vice president of IT and program development, Owens & Minor Inc

"If you walk into a [user's office] and you start spouting techno-geek at them, they're going to kick you out and tell you to get somebody who speaks business."

■ **LOREEN TABOUT,** vice president of information services, Calpine Corp.

"Instead of thinking about 99.999% uptime, think about the experience that the [user] is getting. Forget about the numbers, and worry about what they're seeing."



McKesson's IT Roads Lead to Iowa

One of the speakers at last week's Premier 100 conference was [redacted], CIO at McKesson Corp. San Francisco-based McKesson has cut the number of its data centers from 11 to two – a main facility in Iowa and a secondary site in California. Smith discussed the strategy with Computerworld after her talk.

You said onstage that "America doesn't have to outsource." Do you believe that? I really do. But I prefaced that by saying we are primarily an American company, [although] we have operations in other countries. We looked at India, China, Western and Eastern Europe. Part of it is getting an American management team to understand the incredible issues that you are going to deal with in other countries [and] cultures. It was hard for our management team to get their mind around it.

We would have done it without question, but was it the right thing to do? And I think that's when we began to look at Middle America. Maybe once we get everything consolidated, outsourcing in other countries might be incredibly cheap and very, very routine. But right now, our benchmark numbers look OK.

Did you have problems finding people in Iowa with the IT skills you needed? We got résumés from all over the United States. One of the things that we found is there is real desire [on the part] of people in technology today to want to get back to some basics: to raise their family in a place that may be not a big city.

Would the situation have been any different if you had set up your data center in another place? I don't know the answer to that question. But here's one of the things that I found out about [Middle] America: The work ethic is unbelievable. Nothing stops them from getting into the office. I never worry about whether that facility is going to be manned 24/7 by top-quality people.

Is that why you picked the facility in Iowa? I had a data center I could have selected in Dallas, in Atlanta, in Denver – these were already big and established, and a lot of them had tremendously better facilities and better telecom. The Middle America one we did a lot of thinking about; we were hoping, and we guessed right.

So, on balance, Iowa had all the pluses? It didn't have all the pluses. What we had to do is make a bet and say, "Could we make this work?" The things that we thought were going to be a challenge turned out to be easier than what we anticipated.

– Patrick Thibodeau

Global IT Managers Push To Build 'Blended Culture'

BY PATRICK THIBODEAU
PHOENIX

To succeed in globalizing IT, companies must build a workforce that understands and can adapt to the business needs and cultural expectations of co-workers no matter where they're located, according to IT executives from several large companies with operations around the world.

What such enterprises need is "a blended culture [that] allows everybody to work with everybody else," said John Parkinson, vice president and chief technologist at Paris-based Capgemini. Parkinson took part in a panel discussion that focused on the written and unwritten rules of globalization at *Computerworld*'s Premier 100 IT Leaders Conference here last week.

At Franklin Templeton Investments, developing global working relationships means giving employees the chance to travel to other countries and work side by side with the IT staffers there, said Sandeep Bhatia, director of global customer technology at the San Mateo, Calif.-based company.

The interaction helps the so-called global ambassadors gain a better understanding of business processes in different regions and of their fellow

workers, Bhatia said. "Unless people go and live there and understand each other, it just doesn't happen," he added.

Sometimes simple things can send a message "that you are trying to behave like a global organization," such as being cognizant of local times when scheduling conference calls, said Sherry Aaholm, senior vice president of express and freight solutions at FedEx Corp.'s FedEx Services unit.

In an electronic poll of the audience, a combined 61% of the 224 respondents said cultural and political issues are the main obstacles to their IT globalization strategies (see chart). The panelists seconded the poll results with anecdotes of their own experiences.

For example, they said regulatory issues can pose big challenges — even within a single country. In Canada, for instance, the government of Quebec requires that software be bilingual in some cases, Aaholm noted. She said companies need strong human resources and legal staffs to work with IT project teams on complying with local regulations.

While different regulations can add to business costs, local customs and practices can create outright confusion, according to the panel members.

In the U.S., "we say what we mean," Bhatia said. But in other parts of the world, such as Asia, even a word as seemingly simple as "no" can mean a lot of things, he noted.

"The world is full of little minefields," Parkinson said. For instance, in some cultures, it's impolite to talk to someone before being formally introduced. One element of Capgemini's IT program manager training "is to put people together, videotape them and show them how they're offending each other," he said.

With half of its IT staffers working in countries where they aren't citizens, Capgemini also has to spend a lot of time on "people security," Parkinson said. "We had to put in a whole layer of security that, frankly, we didn't have to worry about a decade ago." ● 53119

SOUND BITES

■ **PAUL HIGGAY,** vice president of IT and program development, Owens & Minor Inc.

"If you walk into a [user's office] and you start spouting techno-geek at them, they're going to kick you out and tell you to get somebody who speaks business."

■ **LOREEN TABBUT,** vice president of information services, Calpine Corp.

"Instead of thinking about 99.999% uptime, think about the experience that the [user] is getting. Forget about the numbers, and worry about what they're seeing."

ONLINE EXTRAS

CHERYL SMITH

Q&A

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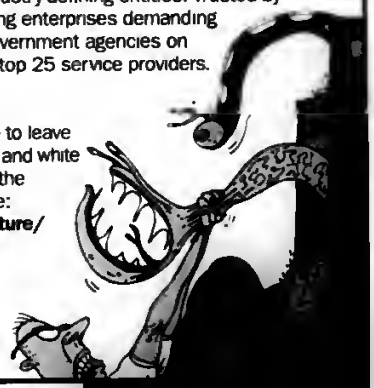

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New York Marriott Marquis · April 26, 2005

Cantor Jolson Room, 9th Floor
1535 Broadway in Times Square, New York City

7:45am to 8:15am	Registration and Networking Breakfast
8:15am to 8:30am	**Introduction and Overview** Julia King, Executive Editor, Events, Computerworld
8:30am to 9:15am	**The Next Wireless Evolution** Iain Gillott, Founder, iGillott Research
9:15am to 9:45am	**Deploying Wireless Broadband Technology: An IT Perspective** Phillip Hirschel, Cellular Services Manager, PriceWaterhouseCoopers
9:45am to 10:15am	Refreshment and Networking Break
10:15am to 10:45am	**Keynote Presentation: Broadband Wireless Solutions for the Enterprise** Roger Gurnani, CIO, Verizon Wireless
10:45am to 11:15am	**End-User Case Study** Larry Singer, SVP, Strategic Insight Officer, Sun Microsystems
11:15am to noon	**Panel Discussion: Real-World Wireless** Moderator: Julia King, Executive Editor, Events, Computerworld Panelists: Norm Fjedheim, SVP and CIO, Qualcomm David T. Phillips, Information Systems Manager, Foley, Inc. Jenkins Ravenel, Principal, Technology and Operations, Network Computing, Bank of America Joseph Ziskin, VP, Global Telecom Industry, IBM
Noon	Program Concludes

Selected speakers include:

Phillip Hirschel
Cellular Services Manager, PriceWaterhouseCoopers

Iain Gillott
Founder, iGillott Research

Roger Gurnani
CIO, Verizon Wireless

Norm Fjedheim
SVP and CIO, Qualcomm

Julia King
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AT DEADLINE

Government Extends H-1B Visa Eligibility

The U.S. Citizenship and Immigration Services bureau this week said the additional 20,000 H-1B visas to be issued this spring will be available to all qualified applicants – not just those holding advanced degrees from U.S. universities. The agency announced the move on the same day the visas were scheduled to be available, prompting criticism from Compete America, a group that last fall had pushed for the visa increase.

Microsoft Buys Groove Networks

Microsoft Corp. has agreed to buy Groove Networks Inc., maker of collaboration software, for an undisclosed sum. Groove founder Ray Ozzie, who created Lotus Notes software, will join Microsoft and report to Chairman and Chief Architect Bill Gates. (For more information, go to QuickLink 53111.)

Novell Ships Server For Linux, NetWare

Novell Inc. has announced availability of its Open Enterprise Server, which combines NetWare and SUSE Linux Enterprise Server to deliver file, print, directory, management, collaboration and application services. Novell also unveiled its ZENworks 7 Linux Management system, which provides centralized control of Linux desktops and servers. The product will ship by midyear.

Intel Boosts Q1 Revenue Projections

Intel Corp. said it expects quarterly revenue to be on the high end of its January estimate, totaling $8.2 billion to $8.4 billion for the first quarter of its fiscal year, which ends April 2. Officials said the revised forecast comes from better-than-expected sales across product lines. Earlier projections said revenue would range from $8.0 billion to $8.4 billion.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY GOSSIP BY MARK HALL

Get Into the Swing Of Configuration . . .

. . . management to keep IT in sync with business needs. Weaving IT with business operations is essential, critical, vital and mightily important to your career prospects. That's not a new notion, but it was a constant refrain heard at *Computerworld*'s Premier 100 IT Leaders conference last week in Phoenix.

Peter Armstrong amplifies that advice but also suggests something concrete to get to the hole-in-one of IT and business alignment. The corporate strategist at BMC Software Inc. in Houston says that if you're not building your own configuration management database (CMDB), you're unlikely to achieve the business service levels your company needs.

A CMDB includes information about all your IT assets, everyone who uses them and what their access privileges are for each and every asset. Armstrong, who spoke at the Premier 100 conference, argues that IT managers depend too heavily on systems metrics that are irrelevant to business users' definitions of proper service levels.

Worse, he says that most IT managers don't know the business impact of a technology problem because they lack an effective CMDB.

The answer isn't "buying technology out of the box and putting it in," Armstrong says. Rather, it's about defining the roles of your employees and the relationships among people, business processes and technology and then closely managing all changes within a CMDB.

To get the best information on how to build a proper CMDB, Armstrong, a native of the U.K., favors the IT Infrastructure Library (ITIL) publications produced by his home country's government — but written by IT practitioners, not vendors or academics.

It's a pity, he deadpans, that these thick tomes are best put to use for long flights from Sydney to Los Angeles when you're having trouble falling asleep. Luckily, you can find the *CliffsNotes* versions, as it were, on the IT Service Management Forum's Web site. They give you all the information you need without requiring a pillow, Armstrong says.

Armstrong claims that U.S. companies are trailing their European counterparts in building ITIL-inspired CMDBs, which he thinks puts businesses in this country at a competitive disadvantage. That's because European IT shops will be able to respond to infrastructure and application problems that are the ones most critical to the business and not just the ones that pop up first in the help desk queue, he says.

Identity-driven model rivals CMDBs . . .

. . . as a path to ITIL's alignment goals. Alan Nugent, chief technology officer at Novell Inc., puts his company's "identity-driven model" of IT asset management squarely in line with the processes outlined in ITIL publications.

"The model is very complementary to ITIL," explains Nugent, another Premier 100 speaker. Waltham, Mass.-based Novell's approach describes hardware, software, services and the changing roles that users can have with IT assets.

For example, you might be able to use a particular application on your desktop PC but not on your laptop at the corner Starbucks. The identity-driven model takes such differences into account, according to Nugent.

What's more, he says, Novell offers a virtual modeling tool that lets IT managers see the relationships among users and IT assets to make it easier to codify the correct connections.

Online service seeks to reduce . . .

. . . head count churn by pinpointing why workers quit. WebExit is an exit-interview service designed for large companies — many of which "find it nearly impossible to interview departing employees and then compile and track the data," claims Beth Carvin, CEO of Nobscot Corp., the Kailua, Hawaii-based developer of WebExit. Exit-interview information is primarily entered into paper forms, she says, and the typical human resources administrator "just pushes them aside."

Ric Heimke agrees. He's vice president and national director of staffing at Sedgwick Claims Management Services Inc., a Memphis-based administrator of insurance claims. Before Heimke started applying insights gleaned from WebExit, annual turnover at his 4,000-person company was in "the mid-20% range," he says.

But since Sedgwick began using WebExit two years ago, the turnover rate has dropped to about 16%. Heimke says it costs Sedgwick one-third of an employee's annual salary to train a new worker, so the savings from improved worker retention have been "huge." Looking at the data, Heimke has also been able to identify problems such as understaffing, training gaps and manager miscues and then apply remedies.

WebExit uses a standard set of questions that can be customized by users, Carvin says. New to the service this year are industry benchmarks — the first one, for the financial services industry, will be available this month. Cost is about $2,500 per month for a large organization. ● 53087

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EMC²

BRIEFS

IBM/Lenovo Deal Gets U.S. Approval

IBM has received final U.S. government approval to sell its PC division to Chinese PC vendor Lenovo Group Ltd. The Federal Trade Commission in January said the $1.75 billion acquisition complies with antitrust laws. Last week, the U.S. Department of the Treasury's Committee on Foreign Investment in the U.S. said the merger doesn't threaten national security. IBM said it expects to close the deal by midyear.

AT&T, Northwest Bank Agree to Pact

AT&T Corp. has won a multimillion-dollar, three-year contract from Northwest Savings Bank to deploy a wide-area networking system that integrates the bank's 152 full-service branches in Pennsylvania, Ohio, Maryland and New York. AT&T aims to improve teller transactions, loan processing and branch-to-branch communications.

AOL Extends HP Services Contract

Hewlett-Packard Co. has extended a services and maintenance contract with America Online Inc. worth tens of millions of dollars. Under the three-year extension to a one-year deal signed last year, HP will manage support for more than 15,000 servers, including 9,000 HP servers and workstations. HP will provide proactive support tools and round-the-clock call management services.

Microsoft, Intel Sign Health Care Deal

Microsoft Corp. and Intel Corp. have agreed to jointly create products and services targeted at European health care providers, which the vendors say have antiquated IT infrastructures. The companies will focus on Germany, Austria and Switzerland but are looking to expand to other countries.

EMC Unveils Bundles For Small, Midsize Firms

Priority for inaugural line is e-mail archiving

BY LUCAS MEARIAN

EMC CORP. last week unveiled a new line of bundled networked storage packages for e-mail archiving targeted at small to midsize businesses.

EMC's first bundled offerings of storage arrays and software for that market feature a Web portal tool that can expedite the process of configuring and ordering products.

The company said its EMC Express Solutions bundles are designed for the growing needs of businesses in areas such as server consolidation and centralized management, backup and recovery, archiving, and remote copying of online and archived application data for disaster recovery.

Scott Saunders, director of information systems at Paxson Communications Corp., a $270 million owner/operator of 60 broadcast television stations in West Palm Beach, Fla., recently upgraded his storage subsystem from an EMC Clariion FC4700 to a Clariion CX500. A package deal would have been more attractive, he said. "Certainly, when you get an integrated package, it helps in the support arena. They've tested it and made sure it all works together," Saunders said.

EMC is focusing its Express Solutions on e-mail archiving systems first because they're among the fastest-growing applications at small to midsize companies, said Mike Wytenus, senior director for EMC Clariion global storage.

"We will add other applications over time," he said, noting that the next bundle will feature Microsoft's SQL Server database and online transaction-processing capabilities.

Not New Ground

Peter Gerr, an analyst at Enterprise Strategy Group Inc. in Milford, Mass., said he doesn't see EMC's new offerings "as being unique in the market. Every major vendor has recognized that the [small]-and-medium-sized enterprise space is a potentially lucrative place to grow its business."

The challenge is bringing the right products through the right channels at the right prices. "I think it's too soon to say whether EMC will be successful in this market, but EMC is making the right moves," Gerr said.

Michael Fisch, an analyst at The Clipper Group Inc. in Wellesley, Mass., described the new program as a step forward for EMC, given its history of focusing on the high end.

Wytenus said companies with revenues of $100 million to $999 million are a sweet spot in the network storage market because they face the same data growth and regulatory pressures as large enterprises but don't have the same size IT staffs or budgets.

One EMC package focuses on consolidating and automating Microsoft Exchange environments. It includes Clariion CX series arrays with cheaper Advanced Technology Attachment drives and EmailXtender from its Legato division, as well as EMC's SnapView and Replication Manager/SE software. For regulatory compliance, the bundle is offered with EMC's Centera content-addressed storage array.

The EMC Express Solutions are available from EMC resellers; pricing starts at $5,995.

53090

EMC Express Solutions

- Express Solutions for Business Protection
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  - PURPOSE: Remote copies for online and archive data recovery
- Express Solutions for Archiving
  - SOFTWARE: EmailXtender Archive Edition, DiskXtender and EmailXtender
  - PURPOSE: Automate online e-mail management for regulatory compliance
- Express Solutions for Backup and Recovery
  - SOFTWARE: EMC Dantz Retrospect, EMC Legato NetWorker, or NetWorker with Clariion SnapView
  - PURPOSE: Faster, more consistent backup and recovery
- Express Solutions for Networked Storage
  - SOFTWARE: Visual SAN, Visual SAN and Powerpath software
  - PURPOSE: Increase storage utilization and availability through centralized management
- Hardware
  - ONE OF THREE OF THE FOLLOWING ARRAYS: Clariion AX100, NetWin 110, CX300, CX500 or CX700

Cisco Updates Switch to Support Multivendor Arrays

CISCO SYSTEMS INC. last week brought out an updated line card for its MDS line of multiprotocol storage switches with a new operating system version and the ability to support multivendor storage management software.

The new 32-port Storage Services Module can enable functions like long-distance data replication, volume management and point-in-time copies across heterogeneous storage-area networks (SAN).

The line card includes an updated application-specific integrated circuit (ASIC) that can reside on either MDS 9200 or MDS 9500 storage switches.

Cisco said the line card's new operating system, Version 2.1, is based on the open Fabric Application Interface Specification – an application programming interface – to allow storage systems from multiple vendors to host applications on the line card.

For example, virtualization technology found in IBM's SAN Volume Controller, Veritas Software Corp.'s Storage Foundation software and EMC Corp.'s Storage Router, can be ported to Cisco's line card, allowing storage administrators to pool capacity.

Michael Passe, senior storage architect at Beth Israel Deaconess Medical Center in Boston, has two Cisco 9500 switches on his 50TB SAN and said he looks forward to the upgraded version's ability to port the Veritas Extended Copy functionality to the new service module. By offloading I/O and CPU work from his application servers, Passe said he can increase backup and restore speed.

Passe said he expects the new version of the modules to ease some vendor-support difficulties that he has faced with host-based storage software.

Arun Taneja, founder of research firm Taneja Group Inc. in Hopkinton, Mass., gave Cisco's Storage Service Module high marks for taking services that had been provided on individual blades on the switch and placing them all on a common module.

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–*Lucas Mearian*

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GLOBAL

An International IT News Digest

U.K. User Groups Join Forces on Software

LONDON

TEN IT USER GROUPS in the U.K. will formally announce an umbrella organization on April 20 in a bid to give customers more clout with vendors on software licensing and quality issues.

The Strategic Supplier Relationship Group (SSRG) will develop a "reasonable code of doing business" with IT vendors, Ray Titcombe, chairman of the SSRG, said in an interview this month. "The SSRG will provide an opportunity for vendors to consult with a wide variety of customers before going public with changes to terms and conditions that could prove to be unrealistic and problematic for users," Titcombe said.

Currently, IT managers have to deal with a variety of pricing schemes from vendors such as IBM, Oracle Corp. and Microsoft Corp. "IT managers can contend with software from up to 20 different vendors in their shops, all with different pricing policies, which makes development costs very difficult to figure out," Titcombe said.

SSRG members include the British Computer Society's ELITE Group of senior IT directors, the Corporate IT Forum, the IBM Computer Users' Association, the U.K. Oracle User Group and the public sector's Society of IT Management.

■ LAURA ROHDE, IDG NEWS SERVICE

Terrorists Target Bangalore Outsourcers

BANGALORE, INDIA

DOCUMENTS SEIZED from three members of a terrorist group in India revealed that they were planning to carry out suicide attacks on IT outsourcing companies in Bangalore, the police commissioner in Delhi told reporters on March 6.

Members of the Lashkar-e-Toiba terrorist group, which is demanding independence for the Indian state of Jammu and Kashmir, were killed in an encounter with police. "The terrorists planned to hit these companies in an effort to hinder the economic development of the country," the commissioner said.

GLOBAL FACT

Two of India's largest outsourcing vendors, Wipro Ltd. and Infosys Technologies Ltd., have headquarters in Bangalore. But most of the IT companies there have disaster recovery plans that cover the possibility of terrorist attacks, said Kiran Karnik, president of the National Association of Software and Service Companies in Delhi. For example, Infosys has a disaster recovery site in Mauritius.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Japan's FTC Hits Intel On Processor Sales

TOKYO

JAPAN'S FAIR TRADE COMMISSION ruled last week that Intel Corp.'s Japanese unit broke local antitrust laws by offering financial incentives to major PC makers so they wouldn't use processors from rival chip makers, such as Advanced Micro Devices Inc.

The commission warned Intel to stop practices that forced some notebook PC makers to agree to buy 90% to 100% of their microprocessors from the company. Intel, which denied any wrongdoing, has until March 18 to accept the ruling or risk further legal proceedings.

The European Commission is conducting a similar investigation of Intel. **53083**

■ MARTYN WILLIAMS AND LAURA ROHDE, IDG NEWS SERVICE

Compiled by Mitch Betts.

Briefly Noted

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FBI Scuttles $170M System For Managing Investigations

BY LINDA ROSENCRANCE

The FBI has officially scrapped a troubled $170 million IT project in which it was developing a new case-management system designed partly to help its agents investigate terrorism. And the agency expects that it will take more than three years to implement a replacement system.

FBI Director Robert Mueller announced during testimony before a subcommittee of the U.S. House Appropriations Committee last week that the Virtual Case File system is being shelved. The fate of the 4-year-old project had been in doubt since January, when the FBI said it was looking at alternative approaches [QuickLink 51982].

"I am disappointed that we did not come through with Virtual Case File," Mueller told the House subcommittee. But he added that he sees the decision as an opportunity to develop a more up-to-date system that will use mostly off-the-shelf software and let FBI agents share information about cases more easily.

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An FBI official who asked that she not be identified said the agency has already begun evaluating commercial products to see if they fit its IT needs. She said FBI officials expect to complete the evaluation and set "a more firm direction" by late this month.

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The Virtual Case File software was commissioned from San Diego-based Science Applications International Corp. in mid-2001 and was originally due to be deployed by the end of 2003. But development was delayed, and SAIC didn't deliver an initial version of the system until last December.

In addition to evaluating off-the-shelf software, the FBI is conducting a prototype test of SAIC's most recent software delivery, according to the agency official who asked to remain anonymous. The technology that was presented to the FBI by SAIC wasn't meeting the requirements that had been set forth, "so we needed to evaluate what they had given us as far as user capability and usability," she said.

SAIC spokesman Jared Adams argued that the FBI hasn't formally killed off the Virtual Case File project and pointed to the ongoing tests as proof that a final decision has not yet been made. "When the tests are done at the end of March, I think then a decision will be made," he said.

But the FBI official said the agency is incorporating lessons learned from the failed project and moving forward. For instance, the agency has created an enterprise architecture with overarching standards for both custom and packaged applications.

Mueller said the new case management system, which won't be called Virtual Case File, will be installed in four phases and should take approximately 39 months to complete. He declined to estimate how much the system will cost. **53125**

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Microsoft

#1

BizTalk Server 2004 named *InfoWorld's* best Process Automation Solution.

Windows Server System

Project Green Details Emerge

Microsoft paints a clearer picture of applications plan at Convergence show

BY MARC L. SONGINI
SAN DIEGO

MICROSOFT Business Solutions' retooled and refined message about the next generation of its applications platform is drawing mixed reviews from customers.

At Microsoft Corp.'s Convergence 2005 user conference here last week, executives began to detail plans around the much-anticipated Project Green development initiative that was first discussed in broad terms in 2003.

The public unveiling of the project reassured some customers but confused others. Some sought more details than Microsoft offered, including pricing strategies and how four product lines of varying sophistication and with different underlying architectures — Great Plains, Axapta, Navision and Solomon — can be merged into a single code base.

Microsoft needs to explain more clearly the effort's effect on users, said Davis Sooknana, IT project manager at Roadtown Wholesale Trading Ltd. "What is the impact it will have on us? It's unclear to me," he said. "Microsoft explained it at a high level. They need to break it down for us. I want a clear road map."

Sooknana wants to see the specific steps required to move to the new system, along with a time frame for when it will roll out. The British Virgin Islands-based wholesaler and retailer runs 16 modules from Great Plains 7.5, along with Microsoft's Exchange Server and SQL reporting services software.

Microsoft officials did work hard to assuage users' fears that they'll be forced to migrate all at once to a new product line. Microsoft emphasized that the process will be gradual and extended its commitment of support from three years to five years.

For Jeff Coates, financial applications specialist at Stahls' Inc. in St. Clair Shores, Mich., the promise of an incremental approach makes Project Green more appealing than it was previously. The maker of graphics for sports apparel runs Great Plains 7.0.

When Microsoft executives first began talking about the project a couple of years ago, many users feared that they would be forced off their existing applications in a big-bang approach and then be forced to adopt a new, incompatible technology — an impression Microsoft avoided making this time around, Coates said.

"The endpoint has not changed in terms of the vision of low cost and high adaptability," said Doug Burgum, senior vice president at the Microsoft unit. "This is a better plan than what we had before. We're allowing customers to receive innovation at their own pace."

The first phase of Project Green, which will continue until 2007, involves the development of a common interface based around Microsoft desktop products such as Outlook, said Dave Coulombe, general manager of Microsoft's Fargo, N.D., development center.

The first phase also calls for the development of features to allow the applications to exploit Microsoft analysis and reporting tools and add support for portals and Web services collaboration technology.

For the so-called second wave of Project Green development, Microsoft will evaluate each product line and create best-of-breed processes from parts of each, Coulombe said. The result will likely be added to the applications after 2008, he said.

The general idea of Project Green "sounds good on paper," said Rick Shrum, director of IT for the Seattle Storm and Seattle SuperSonics basketball teams. It appears that Microsoft will use this initiative to raise the general quality of all its product lines, so the users who will benefit the most are the ones who are lagging in technological sophistication, he said.

"We are interested in a comprehensive ERP strategy, but until I am more certain what their Project Green solutioo will look like, we are in a wait-and-see mode," said Michael Kruger, information systems manager at Designer Doors Inc. in River Falls, Wis. The company is a Microsoft CRM software customer.

"By the time they have a better definition of the overall solution, we may be ready to explore it in more depth," said Kruger. The company's current ERP application is a non-Microsoft product that he didn't identify.

In other news at the show, Microsoft announced the following:

■ The Industry Builder program for Axapta independent software vendor partners. It stipulates that those vendors will develop industry-specific applications that meet Microsoft's quality standards and will receive the vendor's support. The company plans to roll out the program to its other lines later this year.

■ A new reporting wizard for Version 6.7 of the FRx financial reporting software is now available as part of Service Pack 3. There is also a planned integration of FRx with Versions 3.0 and 4.0 of the Navision ERP line in the first quarter of 2006. **53121**

MORE ONLINE

Talk it up: Doug Burgum discusses product development at Convergence:
QuickLink 53036

For additional coverage, visit our ERP/Supply Chain Knowledge Center:
QuickLink 52000
www.computerworld.com

Oracle Bids $476M for Retek

BY STACY COWLEY

One week after SAP AG agreed to buy retail management software maker Retek Inc. for $476 million, Oracle Corp. swept in with a higher counteroffer in an attempt to snatch the company away from its ERP rival.

In a move reminiscent of its bitter campaign for control of PeopleSoft, Oracle launched its bid via press release. On Tuesday, it sent Retek's board of directors a letter that was also released to the media, in which it offered $9 per share in cash, trumping the $8.50 per share that SAP had agreed to pay.

Officials at Retek didn't respond to requests for comment on the tug of war the company has been thrust into; SAP said it's waiting for Retek to respond to Oracle's offer.

Retek observers said that although Oracle's tactics were surprising, its bid was not. "It was the industry's worst-kept secret that Oracle was interested in Retek for probably the past year," said Forrester Research Inc. analyst Noha Tohamy. "Oracle got a little too busy with PeopleSoft. They took their eyes off the ball, and SAP did this preemptively."

The prize Oracle and SAP are tussling over is Retek's customer base of 200 retailers and its portfolio of retail supply chain, demand forecasting and operations management applications. It's a market where Oracle has little presence and where SAP has been trying to build one for several years, with little success.

A Better Fit?

In fact, because the companies have very little product overlap, Oracle would be the better fit for Retek, according to analysts. Oracle said Retek's software could be quickly slotted into its Oracle E-Business Suite. SAP, on the other hand, would need to rationalize significant functionality redundancies between its products and Retek's.

Smith Barney analyst Tom Berquist said in a research note that Oracle's tighter integration with Retek's applications and its stronger presence in the retail ERP market make it a better partner for Retek than SAP would be. He questioned Oracle's handling of its bid, however. Since Oracle and Retek had previously discussed a buyout, Oracle was presumably given a chance to top SAP's offer and declined, Berquist speculated.

"Given [Oracle's] words and actions indicating that it intends to pursue a significant number of major acquisitions over time, potential acquisitions targets may be unlikely to take Oracle's initial 'final offer' at face value, given the company's precedent for raising its bids above these levels," he wrote. "As a consequence, potential targets may increasingly try to find other bidders to play off of Oracle." Oracle itself has revealed many of its targets, such as BEA Systems Inc.

Analysts agreed that whichever suitor wins, Retek customers will likely be better off than they have been with the financially struggling company operating independently.

"A combined company will bring much-needed capital," AMR Research Inc. said in its analysis of the offers. **53136**

Cowley is a reporter for the IDG News Service.

4 A new administrative system manages $1 trillion worth of business for **Reinsurance Group of America.**

8 Wireless sensor networks are a cornerstone of **BP**'s strategy for transforming its business processes.

9 **Marriott International** merges two revenue systems – an in-house project that has yielded solid IT savings.

10 **Kansas City International Airport**'s converged Sonet network is easier to manage, with lower operations costs.

14 **Southern California Edison**'s automation project helps the utility handle meter service more accurately.

15 **UPS**'s package-flow system reduces training requirements for drivers and expedites deliveries.

16 **AFLAC** converts a legacy system using Java, speeding up the processing of electronic applications.

18 **Ogilvy & Mather**'s file-transfer mechanism enables the global exchange of large digital-media files.

19 Through its online portal, **Delphi**'s 4,000 suppliers can now transact deals, receive updates and forecast demand.

20 **Unicef**'s Fly-Away VSAT system gives field workers easy access to a secure global IP network.

22 **Humana** develops predictive models to evaluate benefit plans and offer lower rates to customers.

23 **Nasdaq**'s electronic stock-auction process improves round-trip transaction time seventy-fivefold.

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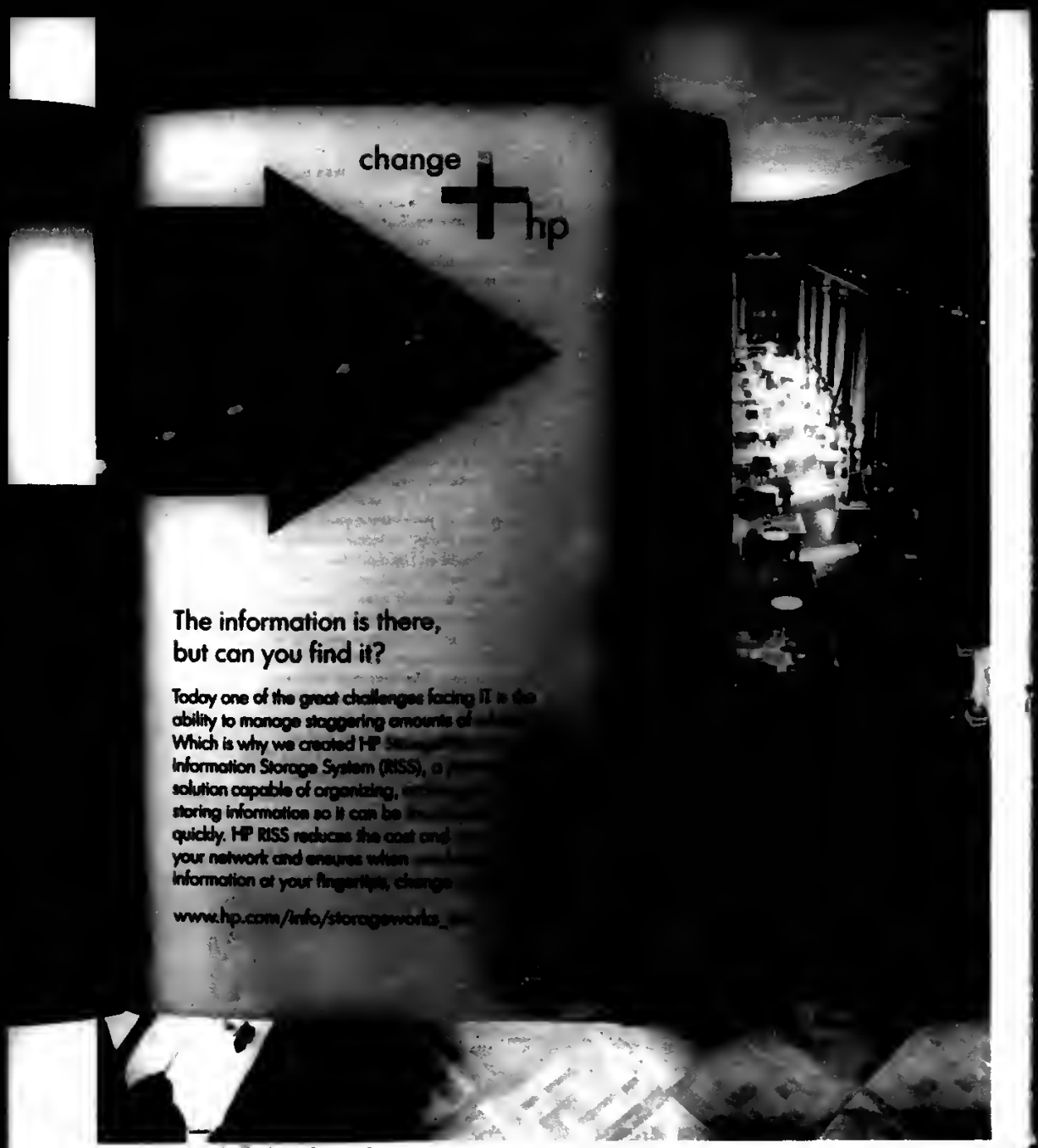
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EDITOR'S NOTE

Ahead OF THE Curve

IF ONLY IT LEADERS HAD ROAD MAPS TO GUIDE THEM. No such luck. Instead, the problems they face are typically as unique as their organizations. What's more, they are often under huge pressure not only to succeed, but to do so quickly. Frequently unheralded, these IT leaders are an integral part of the corporate race to stave off competition and respond to customers.

This year's Best in Class winners met those challenges. With the backing of their organizations, they combined ingenuity and hard work with a talent for anticipating future needs.

The nature of Humana's high-volume health claims business, for example, ruled out using commercial tools to meet its goal of more accurately predicting rates. Instead, led by Chief Technology Officer Brian LeClaire, the IT team built its own set of predictive models that are driving down costs for customers. Consider, too, Marriott's revenue management system, which was so tightly tied to its reservation system that Howard Melnick, senior vice president of information resources application services, chose to build an integrated system in-house. So far, IT support costs have been cut by a third.

Now in its fourth year, *Computerworld*'s Premier 100 Best in Class awards honor leaders like these. They are a select subset of the 2005 Premier 100 honorees who are being recognized for creating business value through innovative technology projects. To choose this year's 12 winners, a panel of judges (at right) and *Computerworld* editors evaluated many worthy candidates. We focused on projects that had measurable payback, strategic importance to business, substantive customer impact, and new revenue or costs savings.

Not every organization can chart new territory or overcome unforeseen problems. These 12 award-winners succeeded in doing so, however, and we hope their stories inspire you to do the same. **52586**

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Special thanks go to our panel of judges, themselves Premier 100 IT Leader 2004 alumni, who helped evaluate dozens of candidates. They are:

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Vice president and chief technology officer, Liberty Mutual Insurance Group, Portsmouth, N.H.

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Senior vice president and CIO, Calpine Corp., San Jose

JOHN M. GILLIGAN
CIO, U.S. Air Force, Washington

MARK F. HEDLEY
Senior vice president and chief technology officer, Wyndham International Inc., Dallas

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Former CIO, state of Ohio, Columbus

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QuickLink a1660

QuickLink a4080

Administration System

BY MARY BRANDEL

THE REINSURANCE industry isn't for the faint of heart. The business processes that enable reinsurance firms to form agreements with other insurance companies to accept all or part of their risk can get mighty complex, mighty quickly.

Now imagine developing a single system that manages reinsurance business processes for oumerous offices around the world — offices wbose staffs speak different languages, are in different time zooes and just might be stuck in their ways as to how they manage their business. It's a challenge that could overwhelm you if you tried to tackle it all at once instead of breaking it into small pieces.

When workers in the global software group at Reinsurance Group of America Inc. (RGA) in Chesterfield, Mo., first took oo this mammoth project, they would have been the first to tell you they were unprepared for the obstacles that lay ahead.

"This whole system required so much communication and teamwork, and I'm not sure we understood at first what we needed to contribute to make it a success," says Mike Ring, project manager at RGA.

But by engaging the business and adapting its own practices to the demands of the situation, the group is successfully rolling out an integrated, multicurrency, multilanguage life reinsurance administration system, dubbed CybeRe, for its international division.

By 2008, CybeRe is expected to manage $1 trillioo worth of business for RGA's 13 offices around the globe.

It's already up and running in South Africa and is nearly ready in the U.K., with Australia next oo the docket.

"CybeRe is able to handle some of the most complex insurance arrangements that RGA and its subsidiaries have created," says Kam Chan, chief architect of CybeRe.

End of the Rainbow

CybeRe fully integrates the many functions that make up the life reinsurance business, including quotes, underwriting, claims, risk managemeot and accounting. Integrating this data, as well as automating processes sucb as clieot audits, will increase productivity, minimize errors and enable RGA to keep pace with growing business needs without increasing staff, says Azam Mirza, vice president of global software and head of the CybeRe effort.

Before CybeRe, workers in RGA's global offices mainly relied oo a mix of spreadsheets and databases to manage clients. Now, with informatioo stored in one location, workers can analyze data by client, cootract and product and find client errors more easily.

"People can stop worrying about, 'If I sell this business, how am I going to manage it?' " Mirza says.

The system also strengthens data validatioo and data quality, Ring adds, which will enable better risk analysis and retention analysis, resulting in better profitability. Ultimately, return on investment will reacb over 15%, "which compares very favorably to the average ROI for RGA's products, which are normally in the range of 12% to 15%," Mirza says.

But the picture wasn't always this rosy. When the

project began six years ago, IT began gathering business requirements from the global offices, planning to emerge a couple of years later with a full-blown system. But by late 2001, it became apparent that a phased approach was more practical.

"The different units all do things slightly differently, and getting everyone to agree became very contentious," Chan explains. So the group embarked on a plan to build a pilot system in one office (South Africa) and gradually implement it in the remaining ones, with as few customizations as possible.

In the process, the software group learned how to conduct user acceptance testing, prioritize enhancements and develop change management, scope management and quality assurance processes, Ring says.

It also learned how to work more effectively with the business. "One of the big problems in the first five years was we thought of this as an IT project," Mirza says. "Now the business units are responsible for defining requirements, testing and making sure the data is in the right format."

The first module was delivered in July 2002, and the entire 10-module system was completed for the South Africa office about two and a half years later. Meanwhile, the U.K. implementation began, and 18 months later, it is nearly complete.

But the sledding wasn't always smooth. For one thing, converting all the historical data and loading it into the CybeRe system required a significant data cleansing and migration effort.

Other factors, such as differences in the terminologies used in various offices, also caused delays. For example, while gathering requirements, IT asked whether the South African office used compound benefits. The answer came back "No," but it turned out that that office just used a different term: *acceleration of benefits.*

"The change in scope delayed us four or five months," Mirza says.

Probably the biggest challenge — which continues today — is getting people to accept common practices as defined by the system.

"That's where we're the bad guys," Mirza says. "If they really need it, they have to prove it. We challenge everything. We don't want to create a product that's convoluted because it tries to be everything to everybody."

Customization

Despite the local customizations, RGA still maintains just one version of CybeRe. Local units can simply "turn on" the options or customizations that are relevant to their businesses.

"Not maintaining 13 different versions is very important," Mirza says. "It's critical to our success."

"CybeRe provides an impressive breadth of functionality," says Donald Light, senior analyst at Celent Communications LLC. "Being a successful reinsurer, especially when dealing with placements of individual risks, requires speed and accuracy. Primary companies, and their producers, need answers quickly. If they don't get those answers from Reinsurer A, they will turn quickly to Reinsurer B.

"Given the life reinsurance market's consolidation of recent years, CybeRe should provide RGA with an important competitive weapon," Light says. "RGA aims to 'reinvent reinsurance.' That is an ambitious goal. CybeRe is an important step along the way." **52415**

Brandel is a Computerworld *contributing writer. Contact her at mary.brandel@comcast.net.*

Administration System

BY MARY BRANDEL

THE REINSURANCE industry isn't for the faint of heart. The business processes that enable reinsurance firms to form agreements with other insurance companies to accept all or part of their risk can get mighty complex, mighty quickly.

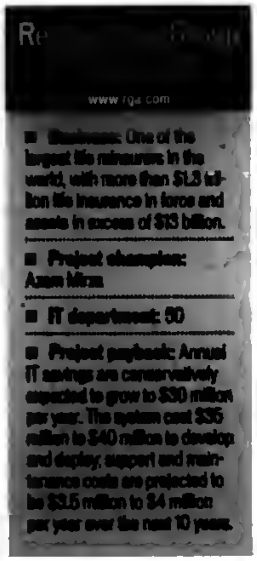
Now imagine developing a single system that manages reinsurance business processes for numerous offices around the world — offices whose staffs speak different languages, are in different time zones and just might be stuck in their ways as to how they manage their business. It's a challenge that could overwhelm you if you tried to tackle it all at once instead of breaking it into small pieces.

When workers in the global software group at Reinsurance Group of America Inc. (RGA) in Chesterfield, Mo., first took on this mammoth project, they would have been the first to tell you they were unprepared for the obstacles that lay ahead.

"This whole system required so much communication and teamwork, and I'm not sure we understood at first what we needed to contribute to make it a success," says Mike Ring, project manager at RGA.

But by engaging the business and adapting its own practices to the demands of the situation, the group is successfully rolling out an integrated, multicurrency, multilanguage life reinsurance administration system, dubbed CybeRe, for its international division.

By 2008, CybeRe is expected to manage $1 trillion worth of business for RGA's 13 offices around the globe.



It's already up and running in South Africa and is nearly ready in the U.K., with Australia next on the docket.

"CybeRe is able to handle some of the most complex insurance arrangements that RGA and its subsidiaries have created," says Kam Chan, chief architect of CybeRe.

End of the Rainbow

CybeRe fully integrates the many functions that make up the life reinsurance business, including quotes, underwriting, claims, risk management and accounting. Integrating this data, as well as automating processes such as client audits, will increase productivity, minimize errors and enable RGA to keep pace with growing business needs without increasing staff, says Azam Mirza, vice president of global software and head of the CybeRe effort.

Before CybeRe, workers in RGA's global offices mainly relied on a mix of spreadsheets and databases to manage clients. Now, with information stored in one location, workers can analyze data by client, contract and product and find client errors more easily.

"People can stop worrying about, 'If I sell this business, how am I going to manage it?' " Mirza says.

The system also strengthens data validation and data quality, Ring adds, which will enable better risk analysis and retention analysis, resulting in better profitability. Ultimately, return on investment will reach over 15%, "which compares very favorably to the average ROI for RGA's products, which are normally in the range of 12% to 15%," Mirza says.

But the picture wasn't always this rosy. When the

project began six years ago, IT began gatbering business requirements from the global offices, planning to emerge a couple of years later with a full-blown system. But by late 2001, it became apparent that a phased approach was more practical.

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Solutions for the

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Wireless Sensor Networks

BY JULIA KING

BP PLC'S wireless sensor network program began with a two-day technology immersion session for the company's top executives in May 2003. Less than two years later, these sophisticated networks are one of the oil and gas giant's cornerstone strategies for transforming business processes, from increasing supply chain visibility and inventory control to monitoring sensitive pumps and compressors on oil tankers plying the North Sea.

"The idea was to open their minds to possibilities," says Chief Technology Officer Phiroz "Daru" Darukhanavala of the technology sessions for BP's top brass. "Once you open the right executives' minds to possibilities, they tend to grab on to an idea and move it along more than IT could ever push it along."

Consider BP's liquefied petroleum gas (LPG) business, which is pilot testing RFID sensors to track the whereabouts and condition of some 35,000 refillable cylinders of gas used for domestic cooking by customers in Denmark. By the end of this year, a Europewide rollout is slated to begin, with RFID-tagged cylinders becoming mainstream throughout BP's worldwide LPG business.

The London-based company is also remotely monitoring its industrial customers' LPG tank fill levels, using battery-powered ultrasonic sensors that transmit information by radio signal

Revenue Management System

BY PATRICK THIBODEAU

THE WHOLE can sometimes be greater than the sum of its parts. Marriott International Inc. found that to be true after it combined two revenue management systems into one.

Revenue data collected by Marriott has many uses, such as predicting customer needs. But two separate revenue management systems kept the hotel chain from easily analyzing revenue data for forecasting and marketing insights generated by 62 million reservations annually at 2,800 properties.

It was also expensive to operate one system for its full-service hotels and another for select-service or extended-stay facilities. And system upgrades and training typically required IT visits to hotels around the globe.

"We wanted to lower our cost and increase our speed to market," says Howard Melnick, senior vice president of information resources application services at Bethesda, Md.-based Marriott. The new system, known as One Yield, has accomplished that.

By combining the two systems, the need for support staff is 33% lower because only one database is used and the system requires little local IT support. Its Web and thin-client-based architecture delivers training remotely and cuts costs.

But Marriott has also improved its ability to forecast changing market conditions. The system's inventory data consolidation improves planning. The upside: Marriott estimates that One Yield delivered incremental profits of

to a low Earth orbit satellite, which relays the data to BP for timely deliveries. The technology, co-developed with Londonderry, Northern Ireland-based Andronics Ltd., is operational on about 200 tanks in England and is being deployed across Europe.

Previously, neither customers nor BP had an accurate way to gauge how much LPG remained in one of the large tanks, and BP would receive lots of last-minute panic calls from customers who had run out unexpectedly. Using the sensor network, the LPG business has improved delivery efficiency by over 33%, according to Ken Douglas, director of technology and sensory networks.

Sensors are also helping BP track the whereabouts and condition of its railroad tanker cars, which transport some 45,000 chemical shipments annually — each valued at about $100,000. In a pilot test last year, BP attached a black box with sensors and a GPS transponder to 21 tanker rail cars in North America. The system captures data on the car's location and temperature, and whether it has been tampered with. The information is transmitted via satellite to a control center, where it can be accessed via the Internet by BP and its customers. The system will eventually include 500 rail cars.

"We always do a pilot, because in virtually all of these cases, we're breaking new ground," Darukhanavala says. "You need to work the pilot and build confidence and assure yourself that the benefits are really there."

Another tip: "It is absolutely necessary that you use an ecosystem of suppliers because no one is smart enough to do it all," he says.

BP's network supplier "ecosystem" includes some 60 companies, each with a different specialty. "What my [internal IT] team does is nurture the executives' ideas forward and help to bring the ecosystem together. It's a technology-transfer function," Darukhanavala says.

There is no question that BP is way ahead of the curve, says Marlene Bourne, an analyst at In-Stat/MDR, a high-tech research firm. "Other [sensor] applications are definitely showing signs of progress, but it will be several years before we see ubiquitous commercial applications," she says. **52309**

$6.7 million last year, its first full year in operation.

Marriott chose to build the system in-house because revenue management is specialized and tightly integrated with its reservation system. The IT staff used standard technologies, including a centralized J2EE architecture, IBM's WebSphere and Actuate Corp.'s reporting tool.

Marriott's decision to build a centralized system with thin-client technology at global locations puts it ahead of many others in the hospitality industry, says Rob Enderle, an independent industry analyst in San Jose. "That particular industry is not known for being aggressive on technology," he says. But that's changing as more hotels automate systems such as lighting and even supply handhelds to maintenance personnel, Enderle adds.

A critical goal for Melnick and John Whitridge, vice president of revenue management systems, was ensuring that the project aligned with the business. By combining two systems, the IT team was also merging different methods for managing and analyzing revenue.

Howard Melnick, senior VP, information resources application services

The business side worked closely with the technical staff. The team had to decide what features to add and discard. "Everybody had to compromise a little along the way," says Whitridge. "That was one of the toughest challenges, because the ideas that came up were great ideas."

Says Melnick, "Our goal is to have scheduled releases of this into the future, get it running, prove success and then continue to build."

One Yield has been rolled out to 1,700 properties since the end of 2003 and is gradually being installed at others. It has become a proving ground for technologies, such as single sign-on, that will likely be extended to other systems. **52434**

BY BOB VIOLINO

KANSAS CITY International Airport completed a three-year renovation project last November that included a significant IT overhaul. One of the key components is a unique, converged network that provides data, voice and video services to all airlines, retailers and airport operations throughout the facility.

The airport, built in 1972, had a limited IT infrastructure in place before the upgrade, says technology director Ron Crain. It included a LAN of about 100 devices in the administration building and a slew of ad hoc PCs and phones used throughout the facility by airport workers and tenants.

Crain says that dearth of technology devices allowed his team to design a new network virtually from scratch. They decided to build a fully converged network to be shared by all airport terminal tenants. No airline or concession would operate a private network. Managers determined that a single network would be easier to manage and would have lower maintenance and operations costs, Crain says.

The network is built on

Sonet (Synchronous Optical Network) and meshed Gigabit Ethernet architectures. It carries all data, voice and video for the 14,000-acre airport campus. A second Sonet ring provides an IP-based network that serves phones and video cameras in bus shelters and waiting areas around a new parking lot.

The network provides links to a central database that's used to support airport operations. Running on three Sun Microsystems servers in the administration building, the database includes real-time interfaces with airline flight systems, the Federal Aviation Administration's air traffic control system, financial systems, weather feeds, runway status feeds, a work-order management system, GPS-based vehicle tracking and the airport Web site. Airport management provides access to portions of the database for network users, depending on their needs.

Security Lockdown

With critical airline data and point-of-sale information such as credit card numbers moving along the network, security was a key concern. For physical security, all network nodes are located within defined, secure areas. Information security is provided in part by an elaborate system of external and internal firewalls that protect the network from outside intrusions and also prevent individual tenants from accessing one another's systems and data.

Benefits of the single network include a lower cost of ownership than would have been possible had the airport used multiple networks. "We built a system that we could maintain at a very low cost," Crain says. He says Kansas City International is one of few airports operating a unified voice and data network, and he expects many airports will use this type of design in the future.

Hugh Brooks agrees. Brooks, project manager at Ultra Electronics Airport Systems, a Manchester, England-based airport design

SCOTT RUDERMAUER

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>
> – **RON CRAIN**, technology director, Kansas City International Airport

firm that handled the software and database integration for Kansas City International, says, "I think this will become more common because airlines are becoming more fragmented and less dominant [in how they use airport space], and airports have decided to take control of their resources." As a result, the airports can better control costs and manage change.

The IT infrastructure now in place cost the airport about $18.5 million, Crain says. He says it's difficult to calculate a return on investment for the project because there's no baseline to compare the network against.

The deployment did come with some challenges. "One issue was how to deploy a LAN over what amounts to a mile-and-a-half corridor," Crain says. "We had to do some unique things in terms of laying the fiber and copper cable in the facilities. It's a complex engineering task."

Another lesson learned, he says, was that products and services don't always deliver the capabilities promised by vendors. For example, the airport had to swap out some of the Sonet hardware for more advanced models because the initial systems didn't provide the features it needed.

That led to some implementation delays, Crain says. But despite those holdups, the entire project was completed on time and on budget. **52409**

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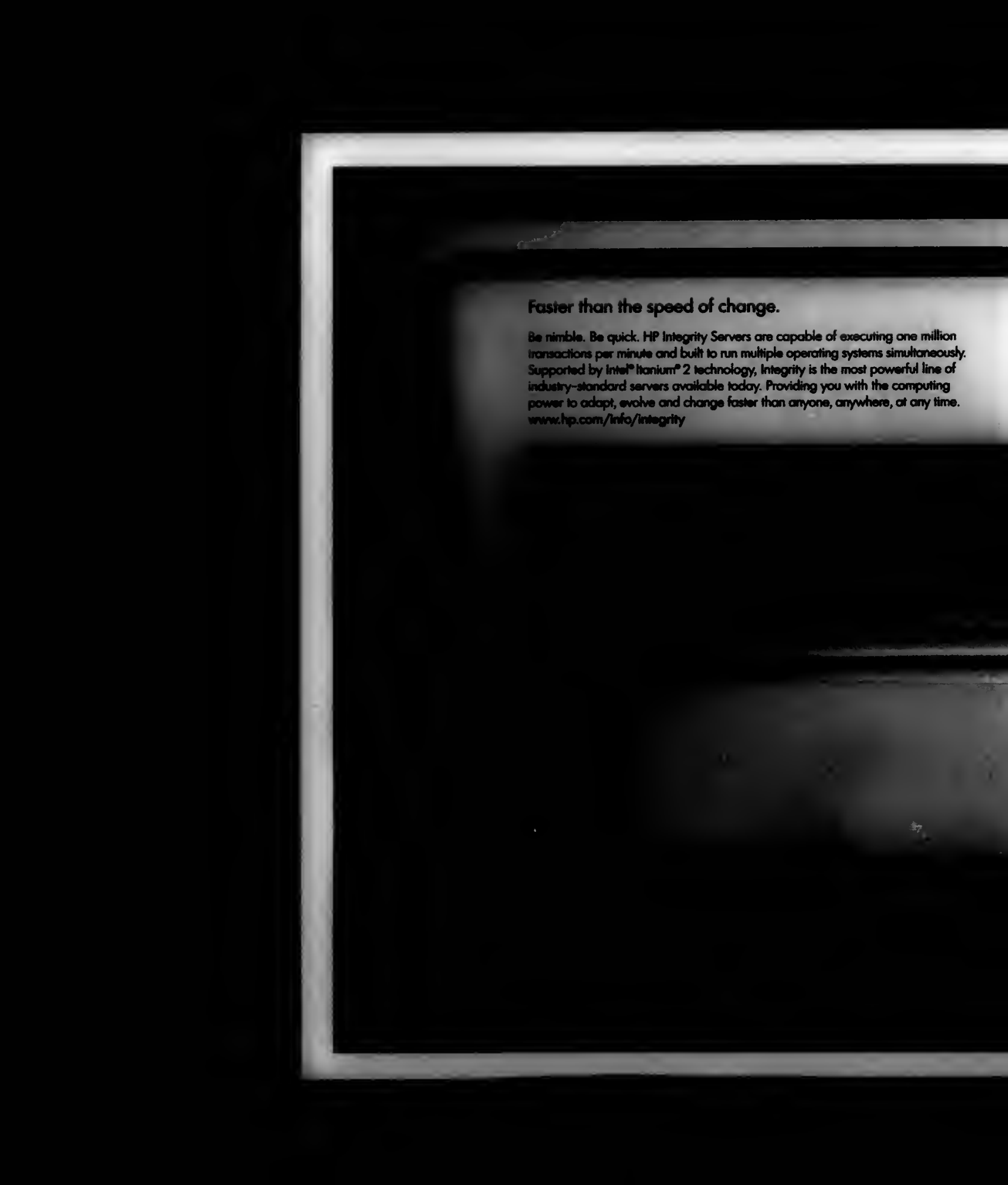
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BY THOMAS HOFFMAN

LAST SUMMER, wheo all of Southern California Edison Co.'s service orders for meter repairs were still on paper, an opeo window could spell trouble.

"We literally had people driving their trucks [with] paper orders [flying] out the windows oo hot days," according to Robb Bourland, SCE's director of applicatioo services.

Clearly, data retentioo was a key driver of the utility's meter process-automatioo effort, which kicked off last June. But there were other important business reasons as well. Prior to launching the effort, Rosemead, Calif.-based SCE didn't have proper controls in place to effectively reconcile its inventory of electric meters with its customer base, Bourland explains.

"The case for the project is that we needed an end-to-end view of this integrated process," says Jodi Collins, vice president of IT. SCE recognized those needs 10 years ago and tried — and failed — at two similar efforts in the mid- and late 1990s, says Bourland.

At that time, SCE was decentralized from both an IT and business unit standpoint, he says. After centralizing the IT organizatioo in 2000, says Collins, "we were able to look across the organizatioo and have the business-line managers appreciate what was oeeded to make a project like this be successful."

That included Collins' fateful decisioo to act as an intermediary between leaders of the company's transmission and distribution, and customer-service business units. The goal was to determine which group was responsible for key business processes that fed into the meter process-automatioo project, she says. That was no easy task, because meter processes such as hilling, repair and monitoring at SCE touch 3,000 employees across multiple operating units.

Jodi Collins, vice president of information technology

"We put the system as a secondary consideration and focused oo the business process issues," says Collins.

"Jodi brought a oew perspective oo end-to-eod business processes, and she spent a lot of time with senior business executives to help them to understand the value of this," says Bourland.

Including labor, hardware, software and consulting services, the project cost SCE slightly more than $10 million, which was 10% to 15% under budget. The benefits include increased accuracy on meter service requests, fewer lost service requests, less duplicatioo of effort and reduced data entry.

Compared with the business-process transformatioo work, the technical side of the project was easy, says Bourland. SCE used a mix of custom applications and off-the-shelf products, such as PowerBuilder, Visual Basic and Java, to develop and support new applications and to integrate them with existing systems, says Bourland.

"There's really oot a good commercial product out there that exclusively addresses meter asset managemeot," says Zarko Sumic, an energy analyst at Meta Group Inc. in Cambridge, Mass.

SCE, says Sumic, is among of the leading electric utilities in the U.S., along with Pacific Gas and Electric Co. and Xcel Energy Inc., to develop an enterprise view of metering to help improve its asset-utilizatioo and demand-response programs. 52332

BY BOB VIOLINO

FOR A COMPANY that delivers more than 13 million parcels and documents each day within a service area that includes some 200 countries and territories, any technology that improves package flow is bound to have a major impact.

That's the case at United Parcel Service Inc., which developed a package-flow applicatioo that's dramatically improving the company's delivery operations.

The technology consists of software and hardware, including application, database and reporting servers at each of the company's package centers. But the heart of the system is an information-packed label, similar to a bar code, that UPS uses for package sorting and addressing worldwide.

The label is generated by UPS customers and affixed to packages moving through the network. Package information is transmitted to UPS and processed before the package is picked up by a UPS driver. At the package center, the information on the label is validated, and another label — called the preload assist label (PAL) — is

generated. The PAL tells UPS workers exactly where to sort the package so it can go oo to its final destination.

Another element of the package-flow application is an advanced geographic tool that lets planners analyze and adjust dispatch plans. UPS drivers can view all packages in optimum delivery order. They are alerted via wireless handhelds as a delivery commitment time nears and are warned if a package is being mistakenly delivered at the current stop.

Customized information, such as where a customer wants a package dropped off if no one is home to receive it, is stored in a database.

UPS first launched the package-flow system in early 2003 and is rolling it out gradually. When fully deployed in 2007, the system will be used by 100,000 employees at more than 1,000 sites, says Cathy Callagee, vice president of information services, who now oversees the package-flow technologies. At the time the project was launched, David Barnes, who was named CIO in January, was vice president and portfolio manager, with oversight of the package-flow project.

Training Slashed

Before the system was in place, UPS loaders in the packaging centers had to memorize hundreds of addresses and ZIP codes. "It would take a long time to get people up to speed," says Callagee. "With the new system, you can stand there, and this puts the label on the package and tells you this is the cart or shelf where the package should be placed."

David Barnes, CIO

The system reduces training requirements for UPS drivers, since their deliveries are known before the start of the loading process and each package has specific instructions on where it should be placed inside the delivery vehicle.

Brian Clancy, a principal at MergeGlobal Inc., an Arlington, Va.-based consulting firm, says other shipping companies have launched similar efforts, but the UPS endeavor stands out. "The big difference is the granularity and the real-time nature of what [UPS is] doing," he says. "They collect more data compared with the other guys. When you have that information available on a real-time basis, you can use that to do a better job of planning resources."

A project of this scale doesn't come without hurdles. "The largest challenge was integrating the package-flow [data] into back-end systems," such as those used for scanning, tracking and delivery, Callagee says. "We have a lot of [legacy] systems out there, and we needed to understand those systems and how to tie them into this one."

There was also the challenge of adjusting to new processes related to package flow. During the prototype phase, UPS managers held meetings with employees who would be affected by the system to ensure that it would meet their business needs.

The expected benefits should make the challenges well worth it. The company anticipates savings of $600 million annually — or more than $2.25 million per business day — once the system is fully operational. They will come from the reduced need for training, lower fuel consumption and less wear on vehicles, Callagee says.

UPS estimates that package-flow technologies will reduce delivery-vehicle travel by more than 100 million miles a year. That translates into an even larger benefit: an annual reduction of 130,000 metric tons of carbon dioxide emissions. 52421

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Re-engineered Legacy Code

BY HEATHER HAVENSTEIN

AFLAC INC. has cracked a tough IT nut — successfully re-engineering a legacy batch system into a real-time application.

The insurance behemoth over the past two years has converted a legacy underwriting field and sales system, using Java to wrap IBM code. The conversion has sped up the processing of the 87% of applications that arrive at AFLAC electronically. As a result, the Columbus, Ga.-based company can sell policies and underwrite them in real time, processing thousands per day.

AFLAC partnered with IBM for the project that it internally dubbed Helix — because the system would be spiraling upward into the real-time computing era without replacing the underlying technology.

Project Helix was a follow-on to a 1999 project that allowed the company to accept 2.7 million applications annually over the Web. But "to have those applications come fully into our organization and dam up behind a brick wall of batch was not the thing to do," says Jim Lester, senior vice president and CIO at AFLAC.

So AFLAC went to work with a loaner mainframe from IBM as it set about re-engineering its legacy code with WebSphere, using a Java native interface to put a layer of Java around the code, says Rob McCurley, second vice president of IT and advanced technology at AFLAC. The code could then be put into Enterprise JavaBeans with Web services on top, McCurley explains.

"It allows us to get deeper and more fine-grained and take subsystems . . . and turn them into Java one at a time for an incremental approach and reduced risk," McCurley says. "The Java native interface allows you to not only wrap code but [also] to have native code call to Java. The interface allows legacy code to call into our modernized code within the same subsystem."

As a result, AFLAC can now process each application in a few seconds and has increased the accuracy

of application processing by 50%, says David Turner, vice president of IT and advanced technology at AFLAC. Instead of running all the applications at night, AFLAC has been able to evenly distribute the workload through a broader window from morning to night.

"When we put the application on a real-time basis, our backlog dropped 50%," says Turner. "The associates who transmit the applications were getting information back more quickly. They could check on them immediately. . . . Before, they had to wait a day or so, and they were less inclined to follow up and correct errors."

"[AFLAC's] recognition early that a complete rewrite of the application was crazy separates them from those who went hell-bent for leather and failed to migrate such a mission-critical application," says Dale Vecchio, an analyst at Gartner Inc. "While most organizations cringed under the architectural mismatch between Java and mainframes, AFLAC recognized the value of extending their existing applications to new, more modern architectures."

But those results didn't come without some bumps along the way. AFLAC was one of the early adopters of WebSphere for the mainframe, using its first version with J2EE support, and the speed of the IBM products was "pitiful to start with," Lester says. "We drove hard on that, and they picked up the ball."

In addition, AFLAC found that heavy-duty regression testing was essential to the success of the project.

"We forced realistic daily volumes," McCurley says. "In parallel, we put our daily workload through the system for many months to make sure it was up to task."

The company now has a foundation for future re-engineering projects. "It provided a foundation for a fundamental shift in our thinking," Lester says. "Are we going to spend $150 million to replace our legacy systems, or do we have the technology and the people to re-engineer this code over the next five or six years? We do, and we are halfway there now."

52426

File Transfer System

BY THOMAS HOFFMAN

LIKE OTHER multinationals, Ogilvy & Mather has operated an extensive global network for years. The advertising agency's virtual private network and Lotus Notes network reach 120 sites around the world. And like other international ad agencies, New York-based Ogilvy experienced problems transmitting large AVI, PDF, JPEG and other media files to its offsbore offices.

"We had horror stories of sending 1Gbit files that never made it to the other end using the VPN, FTP and Lotus Notes networks," says Yuri Aguiar, senior partner and chief technology officer at Ogilvy.

Applying traditional compression technologies does not fully solve the problem, "because you can't really compress the data any further," says Joel Conover, an analyst at Current Analysis Inc. in Sterling, Va. "And to apply a compression technology is just going to slow the transfer down."

So in late 2002, Ogilvy began working with Accellion Inc., a Palo Alto, Calif.-based company that offers products and services for large file transmission. The following summer, Accellion and Ogilvy co-developed and deployed a file transfer mechanism that uses User Datagram Protocol (UDP) over the public Internet.

The file transfer application sits on Accellion HTTPS servers, and the front-end interface is supported by a Web services infrastructure that utilizes Simple Object Access Protocol over HTTPS, says Andres Andreu, technical director of Web engineering at Ogilvy.

The Web-based network has since made it considerably easier for Ogilvy account teams in New York, Singapore, London and other locations to work on common customer accounts for clients such as American Express Co. and IBM, says Aguiar.

In early 2003, Ogilvy began replicating large media files on pilot servers in Paris,

Integrated Portal

BY MARC L. SONGINI

LOOKING FOR A WAY to achieve greater supply chain accountability, flexibility and efficiency, Delphi Corp. in 2001 launched a major supplier portal initiative.

This was a hefty task, given the fact that the Troy, Mich.-based automotive product manufacturing giant has as many as 4,000 direct suppliers, says Vice President and CIO Bette Walker. Up until the portal rollout, suppliers used a variety of means to interact with Delphi — including phone, fax and mail — and there was no common set of processes. Nevertheless, the company needed to wring out costs and link more closely with its suppliers to make them more flexible to its supply chain needs.

"We can't have an arm's-length relationship with them," Walker says. "The suppliers are an integral extension of our organization."

While the exact technical details remain private, the portal is built around an architecture developed by online automotive marketplace provider Covisint, says Christopher Desautel, director of supply chain systems at Delphi. There is a mix of third-party and hosted applications, but the suppliers log on through a single interface

New York and London. Ogilvy and Accellion then extended the replication capabilities to Singapore, Hong Kong, Chicago and other offices. So if a big PDF file was being sent from an office in California to Singapore, the file would load on a server in New York, replicate on servers in Hong Kong and Singapore and then replicate on the New York server for backup, says Aguiar.

"That made a lot of difference, because we reduced the load on the interregional network and distributed them much more," be says.

As part of the network design, Ogilvy also built in billing, tracking and logging capabilities to help monitor each file being sent, in case regional offices wanted to use such information for chargeback purposes or to understand a campaign's total cost, says Aguiar.

The network effort didn't come without challenges. Even though the later versions of the product integrate with Lotus Notes and Microsoft Exchange, when the project first started, Ogilvy and Accellion had planned to run the system on a client/server platform. But their respective engioeers found it difficult to integrate the new network with Ogilvy's Lotus Notes system, says Andreu. Then, in April 2003, Ogilvy opted instead to use a Web services-style approach, "and the integratioo worked out just fine," says Andreu.

Prior to installing the network, Ogilvy had been transmitting about 86GB of informatioo per mooth across its VPN, which is still used for e-mail and other applications, says Andreu. In comparison, the UDP-over-Internet network oow carries 370GB of data per month, he says. 52306

that makes all the back-end plumbing invisible. Since the project weot live in June 2001, Delphi has steadily added features to the portal, such as a system to receive requests for quotes electronically.

Walker says that for the rollout to work, there had to be benefits for the suppliers as well as for Delphi. "We're thinking of not just ourselves. What belps those suppliers helps them to help us," she says. To sweeten the deal for its partners, Delphi explained the benefits at the same time the requirements were laid down. For instance, by using the portal, suppliers can check on payment status, receive updates on Delphi's policies and manufacturing schedules, and forecast demand.

Bette Walker, VP and CIO

Among the biggest challenges to the project's success was responding fast enough to needed process changes, says Desautel. For instance, Delphi had created an online suggestion box for suppliers to give input, but the flood of suggestions was so overwhelming that the company initially lacked the personnel to keep up. Another challenge was ensuring process rigor around the system — for instance, taking away the option of receiving orders by fax, so suppliers would use the Web-based EDI capability of the portal.

James Governor, an analyst at RedMonk LLC, a consultancy in Bath, Maine, says Delphi took the project one step beyond the norm by implementing suppliers' suggestions for process changes. "It looks like Delphi understands the need for cultural change as well as process improvement in order to deliver successful outcomes from IT investment," he says.

The project, which cost in the single-digit millions, paid for itself within a year, says Walker. Supplier suggestions have helped Delphi generate $8 million in hard cost savings, and another $65 million in potential opportunities is being evaluated.

Delphi is now able to track and rate suppliers and can identify problems in the supply chain through root-cause analysis, slashing its quality defects by 50%, Desautel says. 52435

VSAT Satellite System

BY STEVE ULFELDER

ANDRE SPATZ, CIO of the United Nations Childreo's Fund, was named a Premier 100 IT Leader before the December 2004 tsunami that devastated more than a dozen countries in Southeast Asia and Africa. But that disaster underscored the genius of the connectivity system put in place by Spatz's team over the past two years.

Unicef operates in more than 158 countries before, during and after armed conflicts, natural disasters and other tragedies. "We need operational excellence in a difficult environment," Spatz says.

And whereas many other admirable relief organizations pull up stakes sooo after a disaster ends, "we have to create sustainable change," Spatz says. "We have a long-term presence."

To fulfill this mandate, Unicef needs to establish field offices and communications infrastructures rapidly and, in many cases, under almost unimaginable duress. That's where the agency's Fly-Away VSAT program comes in.

Rapid Response

In 1998, Unicef made the theo-bold decision to make IP its sole networking standard. A few years later, the organizatioo asked one of its telecommunications providers, which Spatz declines to name, about the possibility of running IP traffic over the VSAT satellite communications system. "That was in 2000, and people said, 'Who would ever want that?' " he recalls.

Unicef persevered and was sooo running a global IP WAN over satellites. Today, field workers can use a secure global IP network, complete with quality-of-service protocols, to access the same intranet, Internet, infrastructure management and voice-over-IP systems that workers at the organizatioo's New York headquarters enjoy.

Until two years ago, however, there was a crucial drawback to the satellite system: The necessary hardware, including antennas, made it hard to transport to and set up in a typical disaster zone. "We understood that we oeeded an easily transportable version that could be set up in a very short time frame," Spatz says.

Co-developed with Unicef's satellite provider, which Spatz also declines to name, Fly-Away VSAT has proved its mettle all over the world. The setup includes all servers, routers, switches and associated hardware, housed in ruggedized, military-style racks. According to Stephen Fazio, Unicef's global head of telecommunications, deployment time usually ranges from 30 minutes to four hours, depending on antenna type.

Simple Design

At a typical site, the initial installation is performed by Unicef IT and telecommunications workers. However, during the design of Fly-Away VSAT, Spatz's group placed a premium on simplicity and ease of setup. As

> We need operational excellence in a difficult environment.
>
> – ANDRE SPATZ, CIO

a result, local relief workers can be trained in dismantling, transporting and setting up the system. "You cannot do that with standard satellite systems," Spatz says.

Barbara Gomolski, an analyst at Gartner Inc. in Stamford, Conn., applauds the move. "It's a good way to keep costs down, and IT staffs at these groups tend to be very lean, so any offloading you can do is welcome," she says.

The Fly-Away VSAT system is being used in Unicef's tsunami-relief efforts and has been deployed in Iraq, Haiti, several Asian nations, South America and elsewhere.

In November 2003, in response to dire education needs in Liberia, Unicef supported that nation's Ministry of Education when it launched a back-to-school campaign whose goal was to help at least 750,000 children and 20,000 teachers return to 3,700 schools. Within a month, the Fly-Away VSAT system had helped Unicef distribute 4,623 "school in a box" kits, providing supplies for nearly 334,000 children.

Today, 10 to 15 Fly-Away VSAT units are in use, Spatz says. Since the first one was deployed, "we've been scaling it down in both price and size," he says, adding that "we've now got it down to a very reasonable cost."

In another evolution, Unicef has made it possible for other relief agencies to share the resource. "They can just hook in and set up their own pipe to the sky," Spatz says. "That's important at a time like this." **52334**

Ulfelder is a Computerworld *contributing writer. Contact him at sulfelder@charter.net.*

BY GARY H. ANTHES

SEVERAL YEARS AGO, Humana Inc. embarked on a multifaceted program to refocus its business more directly on the consumers of its health benefits plans — its corporate customers and their employees. The idea was to give them greater choice and control over their health, health benefits and budgets.

The $13 billion company had plenty of data on which to base its new ways of doing business: terabytes of information generated by traditional transaction-processing systems. Just one of the 432 tables in its enterprise data warehouse has 430 million rows of health claims data. But the systems that processed claims weren't well suited for the kinds of predictive and analytic tasks that Humana's underwriters, actuaries, marketers and medical specialists now faced.

What they required, it turned out, was the Insight Engine, a suite of four analytic tools developed by Humana: SmartStart is used by employers to evaluate alternate benefit plans and predict their financial results, VeriSight combines historical and predictive data to identify and understand health care trends, the Outcome tool provides insight into consumer behaviors, and the Health Case Management tool spotlights members with certain severe or chronic health problems so they can receive targeted help. In some cases the models can summarize millions of rows of data in just one color-coded display.

A Win-Win Situation

The models, which were completed last October, help Humana "identify markets, enhance products and predict costs," says Brian LeClaire, vice president and chief technology officer at the Louisville, Ky.-based company. "We connect data in ways we had not historically connected it. You are looking at thousands of pieces of information on a screen that, through colors, for instance, will draw your attention to specific patterns, disease categories, places of treatment and so on."

In insurance, the name of the game is setting rates as low as you can to be competitive, but not so low that you lose money. Carol McCall, vice president of Humana's Center for Health Metrics, says the company recently used VeriSight to set rates for a customer.

"The granularity of this information is much finer than they had had previously," she says. "Before, they would have gone out with a much higher rate increase than they ultimately did."

Because of high transaction volumes (millions of claims per month), plus the size of Humana's enterprise data warehouse (3.5TB), commercial extract, transform and load tools proved inadequate, leaving the company no choice but to develop its own. And the key visualization tool from Visual Numerics Inc. in San Ramon, Calif., proved inadequate off the shelf. But through close collaboration, Humana and the vendor were able to tune the product and redesign the application for high volumes, says Mitzi Silliman, an IT vice president.

"Humana, like many other organizations, is just starting to realize that information they have accumulated over the years . . . can be used to positively impact patient care and also reduce medical error," says Scott Tiazkun, a health care analyst at IDC. "Technologies like predictive modeling and analytics are crucial to mine the vast amounts nf information collected in medical records [and] can ultimately lead to more-appropriate medical treatments and reduce health care costs." 52304

Electronic Auction System

BY LUCAS MEARIAN

A YEAR and a half ago, Nasdaq Stock Market Inc. was facing increased competitive pressure from centralized trading platforms, which offer indexing firms a closing stock price at the end of the trading day that is representative of the Buy and Sell orders that have taken place.

Starting with a decentralized market created by hundreds of broker-dealers, Nasdaq's CIO, Steve Randich, came up with an open electronic stock-auction process, called Closing Cross. The system collects the Buy and Sell interests from 3,200 stocks in the last 10 minutes of the trading day, pools it and uses the data to establish a single fair closing price that has been vetted with Nasdaq buyers and sellers.

"You can equate this to the race ending at 4 p.m., and you have one last chance to get your orders in. It has the potential to establish a new price level after the close," says Robert Haggerty, an analyst at Needham, Mass.-based TowerGroup.

Prior to Closing Cross, the last trade that crossed the ticker tape at the end of the day set the price, which didn't reflect the true supply and demand of any particular stock, Randich says.

"This is something we struggled with — with the index firms, as well as the companies that list on Nasdaq, like Microsoft and Intel, because they, too, watch their closing price," Randich says.

Steve Randich, CIO

Developed in-house, the Closing Cross application runs on 11 Hewlett-Packard Co. NonStop S88000 servers, each of which has 16 processors. The application uses a complex set of algorithms to continuously recalculate an indicative closing price, and then it broadcasts that closing price to the market indexes and listed companies.

At the same time, Closing Cross rationalizes the closing prices with price updates occurring in the stock, independently of the closing costs; calculates a price; executes all the trades at that price; and then disseminates the information again. The entire process takes less than four seconds.

"It permits large investors to effect an end-of-day price without having to worry about timing their orders. It also relieves some of the log-jam the market sees in the last half hour leading up the the close of the exchange, because they know they can always get an order done during the Closing Cross," Haggerty says.

Closing Cross orders must be submitted prior to 3:50 p.m. Eastern time. At exactly 4 p.m., Closing Cross executes in an instant and produces a single closing price for each stock that maximizes the amount of shares executed, Randich says.

Closing Cross went live in April 2004, two months ahead of schedule, having been developed on an aggressive timetable that included actively trading test stocks with listed companies during normal trading hours, Randich says.

"There are no dollars involved. Everyone is using [the test stocks] in their production systems, but it's a dummy symbol," Randich says. "By encouraging our market participants to use these, we could rush software to production and debug it there as opposed to trying to internally make it perfect before we release it."

Closing Cross has spurred the development of two similar platforms using the same production method: one for the opening of the market, which went live this past fall, and another for the midday opening, which includes initial public offerings. That platform is expected to go live by the end of this year, Randich says. **52408**

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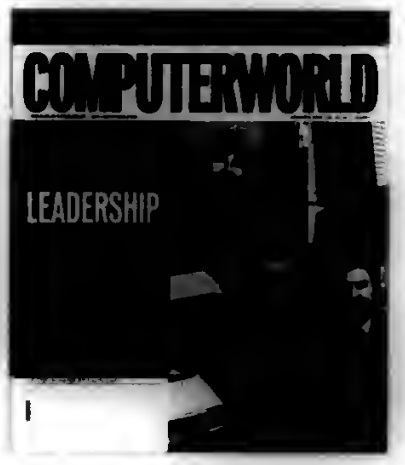

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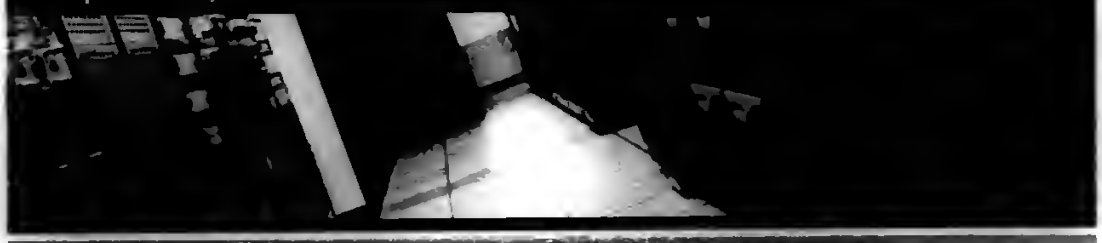

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Business Intelligence Tools Help Nonprofit Group Make Loans to Tsunami Victims

Hyperion and partners donate software to Opportunity International Network

BY HEATHER HAVENSTEIN

A nonprofit organization is deploying new business-intelligence tools to help it scale its IT infrastructure to meet the needs of thousands of tsunami victims in Southeast Asia.

Opportunity International Network, which provides business loans to poor people in developing countries, is rolling out $250,000 worth of BI tools and services donated by Hyperion Solutions Corp. and its partners, Answerthink Inc. and Tableau Software Inc., Hyperion said last week.

Opportunity International, a 34-year-old nonprofit specializes in microfinance — the practice of making small loans that average about $200 — to allow poor clients to start small businesses such as cooking and sewing services. The Oak Brook, Ill.-based organization has partners in developing countries to help manage the loans.

The donated software will boost the visibility of loan portfolios as the organization prepares to add tens of thousands of new clients in tsunami-ravaged India and Indonesia, as well as in AIDS-stricken Africa, officials said.

Without the new tools, which replace a Microsoft Excel-based financial management system, Opportunity International couldn't take on the significant numbers of additional loans it plans to dole out, said Larry Reed, CEO of the charity.

Supporting Growth

Opportunity International plans to increase its client base from 675,000 to over 1 million by 2007 and to 2 million by 2010. The aggressive growth plan has put a lot of stress on the organization's IT infrastructure, according to Reed.

Sunnyvale, Calif.-based Hyperion donated Version 7 of its Essbase database, Analyzer analysis tools and Visual Explorer visualization tools.

Opportunity International intends to use the tools to push information to its 40-plus program managers in 27 countries to help them manage local programs, said Timothy Head, the organization's information services manager.

> **The ability to manage information – especially to track what is happening with clients [in Asia] – is very important for us to ramp up the program there.**
> LARRY REED, CEO, Opportunity International

"We need to pull all the data . . . to one central database that we can analyze, and we need a way to get that information back out to people in the field," he said.

As part of its effort to aid the tsunami-affected regions, Opportunity International is working with 1,000 clients in fishing villages in India and plans to provide loans to 20,000 people in India over the next two years. In Indonesia, the charity may add 10,000 clients during that time.

"The ability to manage information — especially to track what is happening with clients there — is very important for us to ramp up the program there," Reed said.

In Africa, the organization plans to add 11,000 clients in the next three years to help those struggling with the AIDS epidemic.

The Hyperion tools have already made it possible for the charity to shorten the time it takes to close its books each quarter from 45 days to 35 days, according to Head.

"When you have a loan for $200 that is paid back weekly, [and it takes] three months before you find out the loan is late, you are behind the curve," he said.

The software can also help Opportunity International refine a program that measures how the lives of the clients and their children are improved by the loans. Such data can help the organization more easily show donors how their money is being used, Reed added.

Regulatory Requirements

Financial management software often can also help nonprofits meet regulatory reporting requirements, noted Jan Murray, a partner at Cleveland-based law firm Squire, Sanders & Dempsey LLP and a member of the American Bar Association's committee on nonprofit governance.

"They will have an obligation to ensure they have reasonably good financial reporting that can be audited," said Murray. "Without that software, it would be much harder to audit their books." 53072

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Hackers Breach LexisNexis, Snatch Consumer Data

BY PAUL ROBERTS

Hackers have compromised databases belonging to LexisNexis and stolen information on at least 32,000 people, according to a statement last week from LexisNexis' parent company, Reed Elsevier Inc.

The hackers stole passwords, names, addresses, and Social Security and driver's license numbers of legitimate customers of the company's Seisint division. Seisint collects data on individuals that's used by law enforcement agencies and private companies for debt recovery, fraud detection and other services.

LexisNexis identified the incidents in a review of security procedures and warned that there may be more cases of data theft. The incident is eerily similar to compromises at Seisint competitor ChoicePoint Inc., which acknowledged in February that hackers had access to data on 145,000 people.

Meanwhile, Retail Ventures Inc. in Columbus, Ohio, last week reported the theft of credit card and other personal information from customers at 103 of its 175 DSW Shoe Warehouse stores over the past three months. Officials said that a federal investigation of the theft is under way and that DSW is undertaking a review of its IT systems.

Notifying the Public

LexisNexis, which acquired Seisint Inc. in Boca Raton, Fla., in September for $775 million, said it's notifying people whose information may have been accessed and will provide them with credit-monitoring services.

The company also said it notified law enforcement and is assisting with investigations of the fraudulent account access.

The U.S. Secret Service is actively investigating the incident, but spokesman Jonathan Cherry declined to give any details about the case.

Like ChoicePoint, Seisint maintains a massive database of public and private information on individuals. Seisint is the data source for the Multistate Anti-Terrorism Information Exchange system, or Matrix, which brings together criminal and public records from participating U.S. states.

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Bill Shrewsbury, a vice president at Seisint, said that identity thieves used a different approach to breach the company's database than what was used to get ChoicePoint's data, but he declined to elaborate.

In an e-mail statement last week, Kurt Sanford, president and chief executive of LexisNexis Corporate and Federal Markets, said that the company will improve the user ID and password administration procedures that customers use and will add resources to protect user privacy.

Despite the security breach, Sanford defended LexisNexis' business. The company provides important products for fraud detection and identity authenticatioo that are used by law enforcement, homeland security and private-sector concerns, he said. The information is used to "safeguard citizens, find missing children and reduce consumers' financial losses," Sanford said.

The LexisNexis security breach is almost certain to add fuel to the fire of public anger over lax data-privacy laws, said Mark Rasch, vice president and chief security counsel at Solutionary Inc., a managed security services provider in Omaha.

Troubles Elsewhere

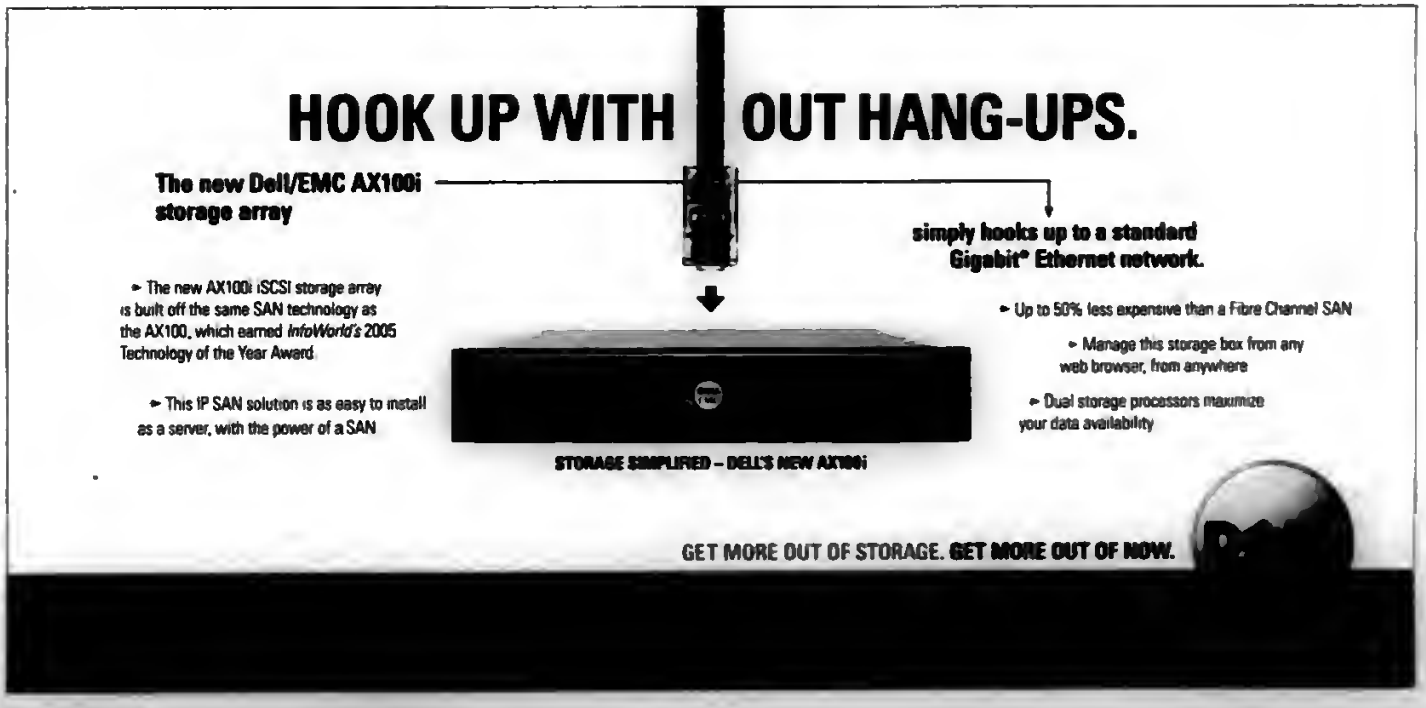
The incident is just the latest in a series of revelations about consumer data being leaked or lost. Recent incidents include the ChoicePoint hack and Bank of America Corp.'s disclosure that it lost digital tapes containing the credit card account records of 1.2 million federal employees, including 60 U.S. senators.

ChoicePoint in Alpharetta, Ga., has been the focus of intense scrutiny and criticism since it acknowledged that identity thieves posed as legitimate customers to gain access to the company's database of 19 billion public records.

Since disclosing the security breach, ChoicePoint has been the subject of investigations by the Federal Trade Commission and the Securities and Exchange Commission and the target of lawsuits alleging violations of the federal Fair Credit Reporting Act and California state law.

Tighter federal controls on the use of consumer data are needed to prevent additional grievous security lapses, like those at ChoicePoint and Reed Elsevier, as well as the lawsuits that follow, Rasch said.
QuickLink 53071

Roberts is a reporter for the IDG News Service.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DON TENNANT

Human Nature

I SUPPOSE EVERY EVENT in your life that means something to you has a defining moment. That was certainly the case for me last week as our sixth annual Premier 100 IT Leaders conference in Phoenix was wrapping up after two days with some of the most talented CIOs and other senior IT executives on the planet.

The P100, as we call it, means something to me for a lot of reasons, not the least of which is that so many people have worked so hard over the years to make it the hugely popular event it is. No one worked harder or more tirelessly than Maryfran Johnson, my predecessor, who created the P100 and nurtured it with a protectiveness that ensured its development into the IT industry's premier user-oriented conference. That contribution deserves to be safeguarded, and it will be.

The defining moment for me came when one of the many return attendees, Bruce Barnes, CEO of IT consultancy Bold Vision, expressed to me what he valued most about the conference. He said attending the P100 each year is like coming to a family reunion where you really love your family. "It's like coming home," Barnes said. "I'm home."

You can't hear something like that and not be moved. It makes you ponder what's really important about an endeavor like the P100, especially when you know other attendees are also looking far beyond the issues we talk and write about all the time such as selecting and implementing technologies. What they really care about are the relationships.

Sandeep Bhatia, director of global customer technology at Franklin Templeton Investments and a 2005 P100 honoree, put it well. "We need to focus on the human aspect of technology," Bhatia said. "Vendors and technologies will come and go. It's the human side of things that's overlooked."

The human side of things. Interesting. It turned out I would hear much the same sentiment expressed by another 2005 P100 honoree when it was all over and I was on my way to the Phoenix airport.

I found myself in a car with Jeffery Marshall, CIO of The Men's Wearhouse, and we were chatting about Marshall's assessment of what had been his first P100 conference. He said he rarely attends this type of event simply because they're not as valuable as he found the P100 to be — and he'll be back.

Marshall said a highlight for him came at the end of the conference when Julia King, our executive editor of events and the conference chairperson who took the P100 reins from Maryfran, was giving her closing remarks. As Julia was speaking, out from behind the stage came her 16-year-old daughter, Emily, who with a beaming smile presented her mom with a bouquet of roses. Julia was absolutely shocked and, as they hugged, I know I wasn't the only one in the audience who misted up.

"It was a touch of humanity," Marshall said. And it occurred to me that a year or two from now, when you ask the people who were there what they remember about the 2005 P100, more likely than not they'll say it was when Emily gave her mom the roses. I guess that's human nature.

So, thanks to Julia and a lot of other people who know who they are, the tradition is intact: This year's P100 was even better than last year's. And, as 2003 P100 honoree Joe Puglisi of Emcor put it, "the transition was seamless."

Yeah, it was. Maryfran will be awfully proud. **53073**

Don Tennant

THORNTON A. MAY

Appearance Matters, Even in IT

DOES what you wear to work really matter? Yes, and quite a lot, according to preliminary data from a multiyear study of IT leadership best practices at the IT Leadership Academy (*www.itleadershipacademy.org*). One thing that the study has uncovered is that virtually all high-performing IT organizations aggressively manage the perception of IT in the minds of key constituents: Great IT leaders manage their own brand and the brand of IT. A key and surprising part of such brand management is how IT dresses.

Anthropologists and historians have long known that clothing and costume are key elements of culture. In the realm of IT scholarship, though, very little energy has been devoted to issues of dress — what we wear, why we wear it, how we wear it. Not much has been written about the psychological aspects of IT fashion. For example, how does what we wear reflect our internal mental state or affect it? Does it reinforce the mental models that business colleagues have of IT, or does it create dissonance?

According to the IT Leadership Academy research, in organizations where IT looks like the business — wearing the same sorts of clothes as people on the business side of the organization — alignment is better and performance improves. This unexpected finding gives rise to a rich and rarely mined vein of sociological, anthropological and psychological research.

We were guided and aided in this new research area by fashion scholar Valerie Steele, chief curator and acting director of the museum at the Fashion Institute of Technology in New York. A preliminary examination revealed

all kinds of fascinating insights:

■ **Women in IT dress better than men in IT** (which may explain the accelerating ascendancy of women into C-level positions).

■ **The different tribes of IT have different costumes.** IT sales folks are suited up, those in break-and-fix roles tend to wear mid-dress pants and golf shirts, security folks remain tragically out of step with sartorial norms, and contracted technology consultants tend to wear collared dress shirts and business-casual wear.

■ **High-performance, image-aware next-generation IT executives have discovered the wonders of affordable bespoke British tailoring.** There's a reason they call those things "power suits." (It isn't too surprising that these execs often choose Whitcomb & Shaftesbury of Savile Row. The tailor's principals, Suresh and Mahesh Ramakrishnan, are IT heroes, Suresh having been a driving force behind the state-of-the-art IT risk management algorithms used so successfully at Goldman Sachs, and Mahesh is a very successful systems integrator.)

What with wearable computers and the iPod as accessories, IT itself is now a fashion industry of sorts. But IT executives still aren't viewed as fashionable. Quite conversely, IT people — at least from the point of view of the creators of popular culture (e.g., movies and TV ads) — remain fashion-challenged. The dominant image of an IT guy remains the egregiously overweight, ethically challenged and destined-to-be-eaten programmer in Steven Spielberg's *Jurassic Park*. This stereotype of poor personal hygiene and sophomoric tastes in slovenly clothing must change if the profession is to evolve. As one health care CIO explained to us, "As always, and as in any other profession, the most important skill sets are the social ones." **52952**

MICHAEL H. HUGOS

Encounters With Complexity

EVERY PROFESSION has at its core an encounter with some central reality. For the sports professional, it's the encounter with the ball (or the opposing linebacker); for the stock trader, it's the encounter with financial uncertainty. I believe that for the IT professional, it's the encounter with complexity. Our profession uses complex technology and procedures to support the organizations we work for. We exist to effectively deal with complexity.

Whether we are moving a data center, installing a new ERP system or developing a leading-edge supply chain system, we experience a dizzying rush of details as we contemplate all the things that need to get done and all the things that could go wrong. Every time I start a project, I experience fear. I've even come to believe that if I'm not afraid, it's a sign that I must be missing something.

IT projects are a response to business challenges (there are only challenges, not problems), and challenges come in two flavors. With the first, people come to you with worried looks on their faces and say they need something done in a hurry. With the second, people come to you with smiles on their faces and tell you about a great opportunity.

I've noticed that in both kinds of challenges, the talk zooms back and forth from the big picture to minute details. The air is charged with emotion, with the business users taking either an overly pessimistic or an overly optimistic view of the situation. Either way, I usually wind up hearing more details than I can handle and getting only a sketchy big-picture view. When the conversation stops, the business users always have just two questions on their minds: "So, what's it going to cost?" and "When can you get it done?" These are very simple questions, but answering them involves all the complexity inherent in developing IT projects. This is the point when I feel afraid.

Ernest Hemingway said people carry fear in their knees. He may have been right, for I often feel a tingling sensation there along with butterflies in my stomach. This must be the body preparing for fight or flight. I've always favored the fight response, but lately I'm seeing the wisdom of flight.

At this moment, I try to remember three things. First, take a deep breath. Second, take another deep breath. Third, very few problems are really as hard as they at first seem. If I make it to the second deep breath, I know I'm off to a good start. Then I collect myself and say, "That's a very interesting challenge you have, and I want to help." This reassures people and gives me a chance to constructively influence the situation.

I continue with, "Let's start this project by defining the challenge and what we need to do to meet it. Next, let's design a system to do that, and then let's build the system." Everybody nods in agreement; after all, what could be more logical than those three steps — define, design and build? The users are able to see that questions of cost and time frame are premature. Constructive influence is starting to happen.

These three steps define a simple yet very powerful way to deal with complexity. Much of their power comes from the very fact that they are simple enough to remember and use in the heat of the moment when it really counts. The encounter with complexity can be mastered by skillful use of simple steps. Next month, I'll tell you more. **52302**

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READERS' LETTERS

CMMI Is Mistakenly Thought to Be Rigid

RUSSELL KAY'S QuickStudy on Capability Maturity Model Integration [QuickLink 51869] is fairly accurate regarding the model structure and contents, but it veers a little off the path in the statement that CMMI's "rigid requirements for documentation and step-by-step progress make it better suited to large organizations than to small." This is not accurate of the model, but it could be an accurate indictment of the consulting and appraisal approaches some have taken with the model.

The "step-by-step" phenomenon has been a cause of terrible confusion and misapplication over the years. Users of the model must understand that the staged representation does not dictate a process curriculum, and process areas are not like college courses with prerequisites for entry. The staged representation evolved as a result of field observations that practices at a higher level generally are limited in the benefits they provide if practices at the lower levels are not stabilized. It is an imperfect representation of the real world, just like any model, but useful within its bounds.

The maturity levels are, however, probably the most abused element of the CMMI, and I have witnessed more confusion, waste and professional agony over them than I care to remember. The worst culprits are not unscrupulous consultants (though there are plenty of them), but the acquisition personnel who tell bidders that they must all be a certain level to bid, and then wash their hands of their due-diligence responsibilities.

This was not always the situation. Versions 1.0 and 2.0 of the Software Capability Evaluation method (a precursor to current appraisal methods) forbade assigning a maturity level number. This methodology was written for acquisitions, and the evaluators were to use the model only to guide their efforts in assigning risk to doing business with various vendors. When Version 3.0 allowed maturity levels and acquisitions to mix, Pandora's box was open.

The bottom line for small groups (or any groups) having trouble implementing the CMMI is that they probably are making it harder than it is.

Shawn Presson
Director of organizational practice, Apogen Technologies Inc., McLean, Va., shawn.presson@apogentech.com

Use Paper Ballots

THE proposal described in the article "Bill Seeks to Fix E-voting Flaws" [QuickLink 52509] sounds like a good idea, but it's backwards. The proper way to fix the voting system is to have the voter mark a paper ballot with an indelible marker, then read the votes electronically and tabulate them. The paper ballot stays at the polling place for any recounts. No one has yet come up with a system that is as reliable and as quick as large hand-marked ballots read by human vote-counters.

Charles J. Lingo
Denham Springs, La.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

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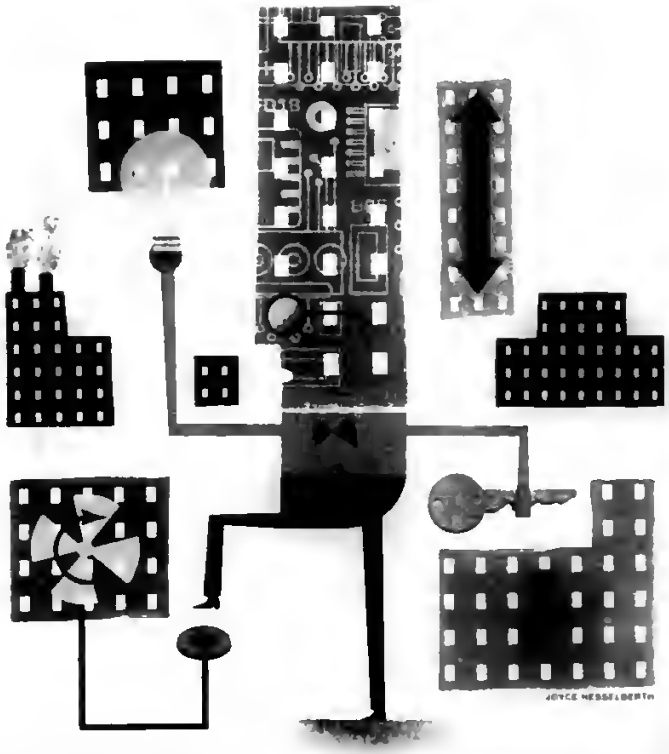
Plugged In
A Virginia electric utility is offering broadband Internet service over its power lines, which customers say is fast and reliable and provides maximum flexibility.
Page 30

FUTURE WATCH
Virtual Therapy
Virtual reality is beginning to catch on as a way to treat patients suffering from a variety of ills, from phobias to the intense pain of burns. But the technology needs to improve.
Page 32

OPINION
Computing the Right Pitch
Curt A. Monash takes a look at predictive analytics, explaining why the technology is hot and what it's supposed to do for you. **Page 36**

THE RISE OF SMART BUILDINGS



Building-automation systems used to function in separate technology silos. Now vendors are rapidly adopting IP, Web services and other technologies that are beginning to converge with traditional IT infrastructures.

BY ROBERT L. MITCHELL

AT PANASONIC CORPORATION of North America's headquarters, a project is under way to replace wall-mounted thermostats with individual, virtual thermostats controlled by PCs.

Real estate management firm Kenmark Group in San Francisco created an operations center to save energy by centrally monitoring and controlling the multiple office buildings it manages. The system includes a common Web portal and uses XML and an IP backbone network to "talk" to components within individual buildings.

Toronto Pearson International Airport is tying a flight information database to heating, lighting and air conditioning systems at each gate in order to restrict energy use to those periods when gate areas are occupied.

As building automation systems (BAS) that control heat, air conditioning, lighting and other building systems get smarter, they're converging with traditional IT infrastructures. Emerging standards are enabling data sharing between building systems as well as with other business applications, improving efficiency and real-time control over building operating costs. Information security concerns, immature standards, the reluctance of vendors to give up proprietary technologies and ignorance among IT professionals of the convergence trend are all slowing the pace of this transformation, but it's gathering momentum.

Facilities managers are driving the change by demanding more-open systems. They're pushing BAS vendors to transform today's closed technologies into Web-enabled applications running over industry-standard IP networks. And the management of BAS is likely to increasingly fall to IT.

"IT folks are entering an era where virtually everything is converging in their direction, and it broadens their horizons tremendously," says Rick LeBlanc, president of HVAC products at Siemens Building Technologies in Buffalo Grove, Ill. IT won't operate BASs, but it will serve the facilities staff as a customer in much the same way it does accounting and other departments today, he says.

Many large companies already have

NTT Building Takes The Next Step in BAS

While most companies are struggling with issues related to the creation of a shared IT/building automation system backbone, NTT Data Corp.'s IT Business Development Sector has gone forward with a next-generation BAS in its 27-story A-RE-A Shingawa office building in Tokyo, which opened in June 2003. The components of the BAS – an energy management system, an IP telephony system and an IP-based security system that includes IP cameras, card readers and door locks – all share a Gigabit Ethernet fiber backbone. The network is divided into virtual LAN segments at a switch on each floor to separate the different traffic types, says Akira Koshikawa, senior executive manager.

The BAS doesn't yet share data with any other business applications on the IT side, says Koshikawa. Open Web-standards initiatives such as OBIX didn't exist when the system was being developed. But the BAS supports XML to allow interfaces with such applications in the future. "By OBIX standardization, BAS data will form a data repository and will enable life-cycle management of the building," he says.

While the backbone network is shared, individual sensors, actuators and other pieces of endpoint equipment use LonTalk. A LonTalk/IP router on each floor interfaces with the IP backbone and enables IP tunneling. Today, LonTalk is better than IP for small data transmissions, Koshikawa says. But, he adds, "in the future, IP interface equipment with IPv6 technology will take its place."

– Robert L. Mitchell

centralized BASs that monitor and control the environment throughout large buildings and across campuses. These systems have begun to migrate to more open IT infrastructures in much the same way that telephone systems and IT networks have converged.

"Right now, there is a clamor to integrate control systems into IT networks," says Tom Hartman, principal at The Hartman Co., a consultancy in Georgetown, Texas. But the trend is likely to go well beyond that. Today's BASs typically include a network of sensors and other devices connected to controllers on each floor, a master controller for a building or campus, a Web server front end for monitoring building systems, and a back-end database for storing historical data (see diagram, page 28). But as intelligence continues to move into actuators, chillers, security cameras, sensors and other elements of building systems, these devices will increasingly communicate as peers via Web services, allowing BASs to be more flexible and integrate better with other systems.

"Next-generation buildings will be much more [integrated] than simply having the building automation system use the IT network," says LeBlanc.

"The long-term vision is that you'll be able to physically control everything based on preferences, criteria and business rules," says Joshua Aaron, president of Business Technology Partners Inc., a New York-based consultancy that helps companies physically move their IT infrastructures and data centers. But, he adds, "I don't see a lot of companies springing for it yet."

Open standards are just beginning to evolve and will likely break down the silos between building systems ranging from physical security to elevator controls. And the data from those systems is likely to be shared with other business applications such as the accounting system. This will allow for more-efficient buildings as applications are developed that can capitalize on newly converged data streams and real-time access to data.

"Standards will allow data to be shared between the two systems, and business decisions can be made [based] on that merged data," says Ron Zimmer, president of the Continental Automated Buildings Association (CABA) in Ottawa. But this nascent trend has largely gone unnoticed by IT organizations, Zimmer says. "It's being driven by the building aide."

In the past, controlling the heat involved a call to the facilities person in the basement, who would turn valves

> **The long-term vision is that you'll be able to physically control everything based on preferences, criteria and business rules.**
>
> **JOSHUA AARON, PRESIDENT, BUSINESS TECHNOLOGY PARTNERS INC.**

to adjust the temperature. Current automated systems use sensors to detect comfort level and actuators to control the valves, but little else has changed.

"The first step with systems when they get computerized is you pave the cow path," says Toby Considine, chairman of the OASIS Open Building Information Exchange (OBIX) committee, which was formed in April 2003 to develop a standard, Web-based set of building-control system interfaces.

Converged Nets

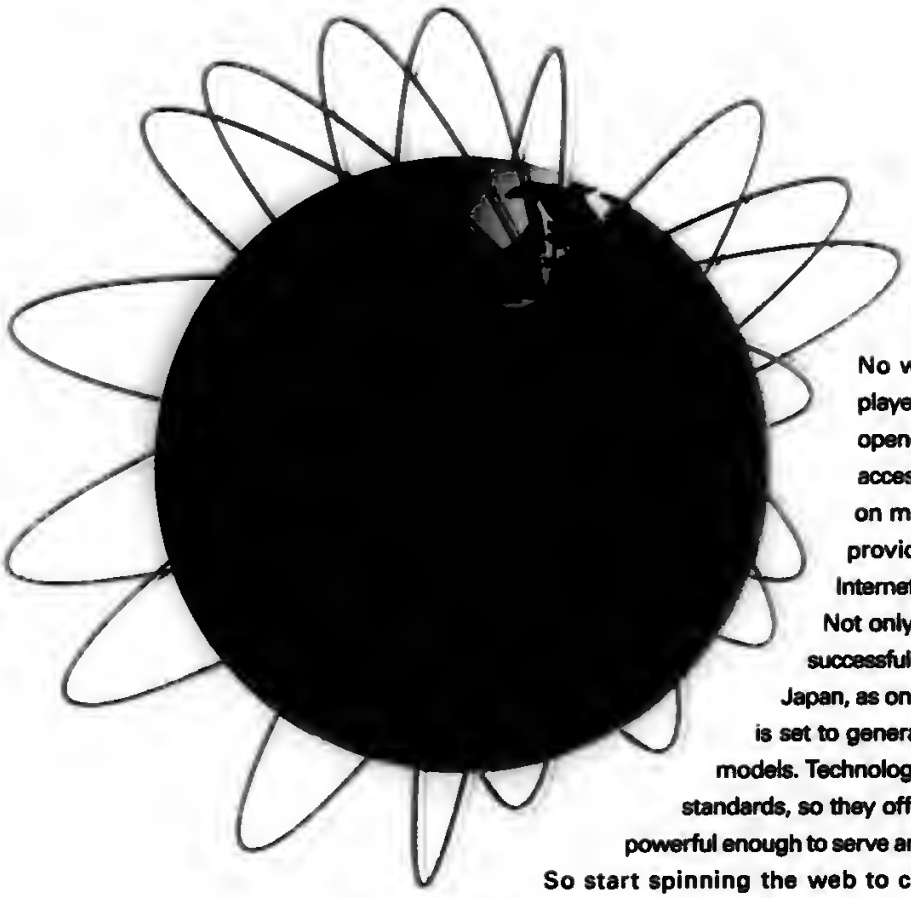
Standardization has started from the bottom up. Proprietary cabling systems in networks that link sensors and other devices to controllers on individual floors have given way in recent years to two competing, open protocols, BACnet and LonTalk, while floor controllers are migrating onto IP backbones.

Barry Haaser, executive director of LonMark International, says LonTalk and BACnet will prevail at the device level for technical and cost reasons. Others aren't so sure. "Instead of two guys running the IT and controls networks, why not one guy? I see IP going down to the individual device," says Anno Scholten, chief technology officer at BAS vendor Plexus Technology Ltd. in Irving, Texas.

But sharing the IP backbone raises security concerns among network administrators. Yale University is starting a project to consolidate its BAS onto an IP network that will link 210 campus buildings, and it plans to tie the BAS into a room-scheduling system that will automatically control energy usage based on room occupancy. For security reasons, Bill Daniels, manager of systems and technologies for the universi-

Continued on page 28

How Japan helps Cisco Systems spin a stronger web.



No wonder Cisco Systems, the preeminent player paving the information superhighway, just opened en R&D center in Tokyo. With broadband access accelerating and traffic five times heavier on many ISP networks than that carried by U.S. providers, Japan is where the future of global Internet growth is already happening.

Not only has a government-led "e-Japan" initiative successfully incentivized rapid broadband deployment—Japan, as one of most sophisticated broadband markets, is set to generate many of the world's best new business models. Technologies perfected here satisfy the most rigorous standards, so they offer another huge payoff: they promise to be powerful enough to serve any other part of the planet.

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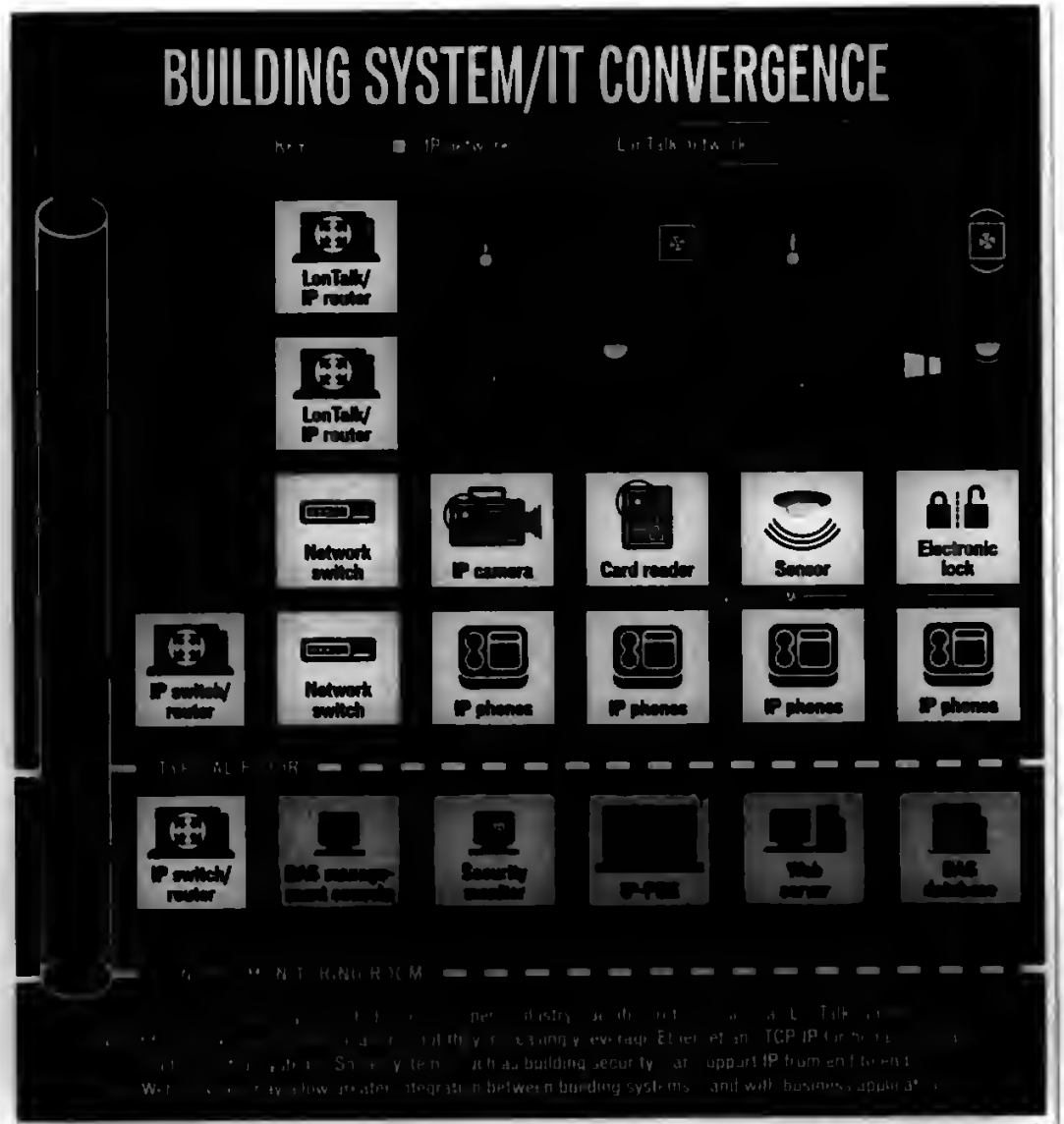

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ty's facilities group, has created an isolated, parallel network that's protected by firewalls and uses nonroutable IP addresses to keep data off the Internet.

Jerry Hill, director of systems engineering at Yale, says security is paramount. "We don't want a student to hack into our building management systems just because they can," he says.

The problem is that Daniels wants to integrate the BAS with the university's accounting system for billing and chargeback, but facilities staffers who log in remotely typically can't get a static IP address from their Internet service providers.

Security is a problem at multiple levels, says Considine. Control system manufacturers have rudimentary password security mechanisms, but most have "no concept of directory-enabled security," he says. This worries Mark Kendall, CEO of Kenmark Group. "In some of our buildings, you can access the front door locks. Security is a very serious matter," he says.

Web Enablement

The pieces for successful IT/BAS integratioo areo't all in place yet. "Various XML groups are developing schemas to interface the building systems to the business systems," says Kirk McElwain, technical director at CABA. But right now, the lack of an industrywide language to program controls is an impediment, says Considine. He expects XML-based schemas to evolve but says basic interfaces must come first. What's needed is an abstraction layer so that programmers or other users don't have to understand control systems, he says.

For example, Johnson Controls Inc. developed a system for Torooto Pearsoo International Airport that's designed to allow its Airport Traffic Informatioo Management System (ATIMS) to control lighting and heating at gates as air traffic controllers update flight information. The ATIMS database can pass an encrypted XML message via SOAP to a cootrol system that brings up heat and lights at a gate.

Michael Riseborough, the airport's general manager of building and facilities, says that's just one part of an ongoing integration process.

The OBIX initiative includes a draft discovery service to allow sensors and other devices to plug and play. OASIS is also working on an alarm service that will offer a common interface for alerts and a service for recording historical data such as room temperatures. Industry-specific services are also under discussion, Considine says. "If OBIX works, we may have more Web services that are OBIX-related than all other Web services combined," he says.

Users are already experimenting with Web-based interfaces and XML. Kenmark Group can query sensors and other devices on its LonTalk network by way of a gateway. Updates go to a central database in its operations center. But integration isn't always easy.

Estructures Inc. offers a hosted BAS service that uses SOAP and XML to interface with customers' building-control systems through a LonTalk gateway device. But the interface only goes so deep. "It's only a veneer. Oddly enough, [customers] seem to be comfortable with that," says Scholten, former vice president at the Austin-based company. But behind the scenes, integrating with customers' building-control systems isn't as easy as it should be. "Because there are no standards, we're doing a lot of self-invention," he says.

BAS vendors continue to move cautiously and cling to proprietary interfaces, but Hartman says the industry will move on with or without them. "I don't think it's going to be the control companies that are going to lead the way on this. It's going to be the IT manufacturers," he says.

Companies that outsource IT to companies such as IBM often ask if the vendor can manage the BAS also, says Robert Frazier, an executive consultant at IBM. Today's systems are just too proprietary to gain the economies of scale necessary to do that profitably, he says. But emerging standards will make it possible to manage these systems within IT management frameworks.

"This is really emerging," says Mark Cherry, marketing manager at Honeywell International Inc. in Morristown, N.J. "Because IT's infrastructure is leveraged to knit this together, IT is becoming the glue." **52870**

STAFF CONVERGENCE

Some facilities staff functions will remain the same, while other responsibilities could merge with IT.

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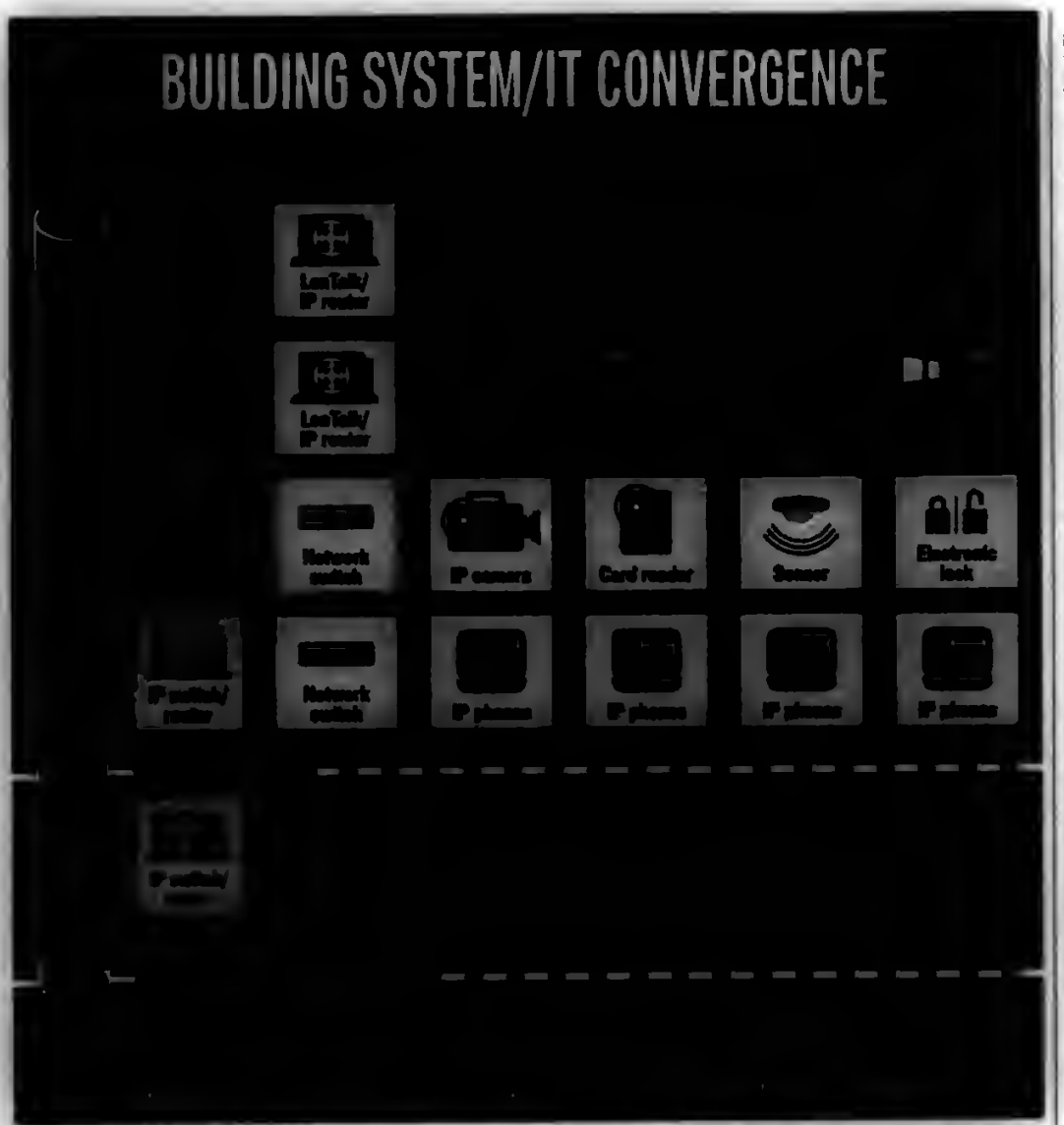

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STAFF CONVERGENCE

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Plugged IN

BY THOMAS HOFFMAN

BEN SEAN PORTER wants to transmit drawings and other large files via e-mail from his office at Robert B. Loveless Architects, he just has to plug his computer into a wall outlet.

That's because Porter and his six colleagues have been using a broadband-over-power-line (BPL) Internet service for the past two years. Communication Technologies Inc. (ComTek), a Chantilly, Va.-based telecommunications and IT integration company, owns and operates the BPL service for the Department of Public Works of the city of Manassas. The service is fast and reliable, Porter says, and the only piece of equipment he needs is a modem the size of a portable CD player that sits on a closet shelf and connects to the office switch.

The technology that makes Internet connectivity possible over standard power lines is pretty simple. Manassas uses $350 fiber-optic modems that are encased in boxes approved by the National Electrical Manufacturers Association (NEMA). The boxes are about the size of a VHS tape and are installed near transformers. Also contained in the NEMA box is a concentrator unit that connects Ethernet to BPL. The customer at the other end simply needs a modem and an Ethernet jack.

"It's deceptively simple," says Walter Adams, a vice president at ComTek.

"It's very similar to the DSL service I use at home," says Porter. He adds that he was surprised by the flexibility of the system. "You can just go into any room and plug it in."

That kind of flexibility — plus the speed, cost and reliability of the BPL service — has helped Manassas sign up more than 200 residential customers, or 10% of the homes in which the service is available. There are 1,300 customers on a waiting list, Adams says.

The city expects to spend about $500,000 enhancing its telecommunications and electrical infrastructures by the time ComTek completes the network installation at the end of March, says Mark LeRoy, utility finance manager for Manassas. He anticipates a six-year return on investment.

Under its revenue-sharing agreement with ComTek, Manassas is paying for fiber-optic equipment that's being installed throughout the 10-square-mile city and is subcontracting its field workers to ComTek to install the modems, concentrator units, fiber Ethernet connectors, repeaters and other BPL equipment.

Manassas Public Works had about 30 miles of fiber-optic wiring installed throughout the city before the BPL deployment began, and it expects to add another 125 miles by the end of this month, says Brett Massey, manager of energy services for the city.

At a cost of $28.95 per month for residential service and $39.95 per month for commercial service at a minimum speed of 300Kbit/sec. to and from the Internet, Manassas' BPL service compares favorably to the $42.95 that Comcast Corp. charges cable-modem customers who also subscribe to its cable television services. Cable throughput is typically 600Kbit to 800Kbit/sec. from the Internet to the subscriber and 128Kbit to 256Kbit/sec. to the Internet.

To date, just a handful of U.S. electric utilities have deployed BPL Internet services, says Jim Spiers, an analyst at Meta Group Inc. in Stamford, Conn. They include Cinergy Corp. in Cincinnati and Idacorp Inc. in Boise, Idaho.

Technical Hurdles

There are technical shortcomings that can hamper BPL service. "Electric lines are not designed to carry data," says Adams, who notes that splicing of power lines can weaken the Internet bandwidth signal they carry.

In addition, some above-ground BPL equipment can rust within a matter of months as a result of corrosion caused by saltwater in coastal areas. Meanwhile, some of the cladding that surrounds underground fiber-optic connections is soy-based and can entice groundhogs to chew through the wires, a challenge facing all fiber-optic network operators. Eighty percent of Manassas' BPL network is below-ground, but it has yet to encounter any rodent problems, says Adams.

Still, he acknowledges that BPL gear "doesn't snorkel well" when underground equipment is exposed to flooding. "We've tried to protect them with $100 boxes, but we've discovered that Ziploc bags and tape actually work best," says Adams.

Corrosion problems can be solved, says Zarko Sumic, an energy industry analyst at Meta Group. The biggest technical challenge for BPL is the inductive nature of transformers, says Sumic. Electromagnetic induction can produce voltage across a conductor situated in a changing magnetic field. Because transformers are inductive, BPL providers have to install bypasses around the transformers in order to maintain a steady signal, says Sumic. "You don't have that issue with cable," he adds. The BPL equipment that ComTek uses will work through the transformer without having to bypass it, says Adams.

"Not all [BPL] equipment is created equal," says ComTek President and CEO Joe Fergus. For instance, ComTek installs BPL equipment from Main.net Communications Ltd., an Israel-based BPL equipment manufacturer whose gear is "among the most stable in the industry," he says.

Main.net is planning to introduce next-generation BPL equipment this quarter that can support 4Mbit to 6Mbit/sec. capacity to customers, says Adams. ComTek is preparing to offer Manassas customers tiered services, so customers would pay different rates for, say, 1.5Mbit/sec. and 2Mbit/sec. service, says Adams.

Manassas officials remain bullish about the potential of BPL. "It's not a 'get rich quick' scheme, but it's really starting to take off," says LeRoy.

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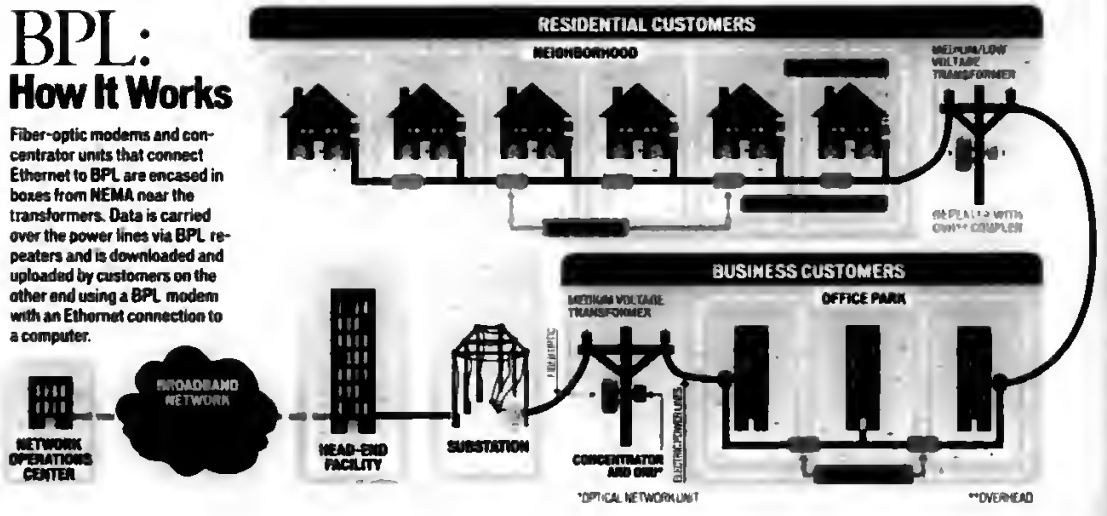
BPL: How It Works

Fiber-optic modems and concentrator units that connect Ethernet to BPL are encased in boxes from NEMA near the transformers. Data is carried over the power lines via BPL repeaters and is downloaded and uploaded by customers on the other end using a BPL modem with an Ethernet connection to a computer.



Plugged IN

A Virginia public works company delivers on a broadband-over-power-line initiative.

BY THOMAS HOFFMAN

WHEN SEAN PORTER wants to transmit drawings and other large files via e-mail from his office at Robert B. Loveless Architects, he just has to plug his computer into a wall outlet.

That's because Porter and his six colleagues have been using a broadband-over-power-line (BPL) Internet service for the past two years. Communication Technologies Inc. (ComTek), a Chantilly, Va.-based telecommunications and IT integration company, owns and operates the BPL service for the Department of Public Works of the city of Manassas. The service is fast and reliable, Porter says, and the only piece of equipment he needs is a modem the size of a portable CD player that sits on a closet shelf and connects to the office switch.

The technology that makes Internet connectivity possible over standard power lines is pretty simple. Manassas uses $350 fiber-optic modems that are encased in boxes approved by the National Electrical Manufacturers Association (NEMA). The boxes are about the size of a VHS tape and are installed near transformers. Also contained in the NEMA box is a concentrator unit that connects Ethernet to BPL. The customer at the other end simply needs a modem and an Ethernet jack.

"It's deceptively simple," says Walter Adams, a vice president at ComTek.

"It's very similar to the DSL service I use at home," says Porter. He adds that he was surprised by the flexibility of the system. "You can just go into any room and plug it in."

That kind of flexibility — plus the speed, cost and reliability of the BPL service — has helped Manassas sign up more than 200 residential customers, or 10% of the homes in which the service is available. There are 1,300 customers on a waiting list, Adams says.

The city expects to spend about $500,000 enhancing its telecommunications and electrical infrastructures by the time ComTek completes the network installation at the end of March, says Mark LeRoy, utility finance manager for Manassas. He anticipates a six-year return on investment.

Under its revenue-sharing agreement with ComTek, Manassas is paying for fiber-optic equipment that's being installed throughout the 10-square-mile city and is subcontracting its field workers to ComTek to install the modems, concentrator units, fiber Ethernet connectors, repeaters and other BPL equipment.

Manassas Public Works had about 30 miles of fiber-optic wiring installed throughout the city before the BPL deployment began, and it expects to add another 125 miles by the end of this month, says Brett Massey, manager of energy services for the city.

At a cost of $28.95 per month for residential service and $39.95 per month for commercial service at a minimum speed of 300Kbit/sec. to and from the Internet, Manassas' BPL service compares favorably to the $42.95 that Comcast Corp. charges cable-modem customers who also subscribe to its cable television services. Cable throughput is typically 600Kbit to 800Kbit/sec. from the Internet to the subscriber and 128Kbit to 256Kbit/sec. to the Internet.

To date, just a handful of U.S. electric utilities have deployed BPL Internet services, says Jim Spiers, an analyst at Meta Group Inc. in Stamford, Conn. They include Cinergy Corp. in Cincinnati and Idacorp Inc. in Boise, Idaho.

Technical Hurdles

There are technical shortcomings that can hamper BPL service. "Electric lines are not designed to carry data," says Adams, who notes that splicing of power lines can weaken the Internet bandwidth signal they carry.

In addition, some above-ground BPL equipment can rust within a matter of months as a result of corrosion caused by saltwater in coastal areas. Meanwhile, some of the cladding that surrounds underground fiber-optic connections is soy-based and can entice groundhogs to chew through the wires, a challenge facing all fiber-optic network operators. Eighty percent of Manassas' BPL network is below-ground, but it has yet to encounter any rodent problems, says Adams.

Still, he acknowledges that BPL gear "doesn't snorkel well" when underground equipment is exposed to flooding. "We've tried to protect them with $100 boxes, but we've discovered that Ziploc bags and tape actually work best," says Adams.

Corrosion problems can be solved, says Zarko Sumic, an energy industry analyst at Meta Group. The biggest technical challenge for BPL is the inductive nature of transformers, says Sumic. Electromagnetic induction can produce voltage across a conductor situated in a changing magnetic field. Because transformers are inductive, BPL providers have to install bypasses around the transformers in order to maintain a steady signal, says Sumic. "You don't have that issue with cable," he adds. The BPL equipment that ComTek uses will work through the transformer without having to bypass it, says Adams.

"Not all [BPL] equipment is created equal," says ComTek President and CEO Joe Fergus. For instance, ComTek installs BPL equipment from Main.net Communications Ltd., an Israel-based BPL equipment manufacturer whose gear is "among the most stable in the industry," he says.

Main.net is planning to introduce next-generation BPL equipment this quarter that can support 4Mbit to 6Mbit/sec. capacity to customers, says Adams. ComTek is preparing to offer Manassas customers tiered services, so customers would pay different rates for, say, 1.5Mbit/sec. and 2Mbit/sec. service, says Adams.

Manassas officials remain bullish about the potential of BPL. "It's not a 'get rich quick' scheme, but it's really starting to take off," says LeRoy.

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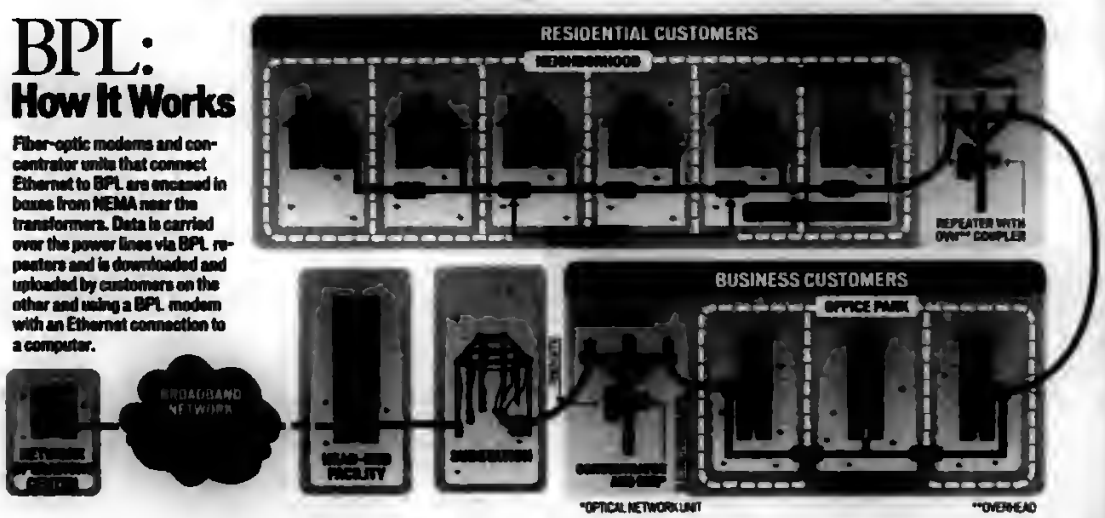

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VIRTUAL THERAPY

Imagination trumps pain and phobias.

By Linda Rosencrance

VIRTUAL REALITY, technology that gives users the feeling they are somewhere else, can be of great value in treating people suffering from a variety of physical or psychological conditions.

Therapy based on the technology is being used in a small number of U.S. clinics to treat burn victims and people with phobias, such as the fear of flying, spiders and heights. Researchers say the technology holds enormous promise for treating post-traumatic stress disorder and addictions and for use as a distraction technique in painful dental and medical procedures, including chemotherapy and physical therapy.

Advances in the technology, such as higher-resolution head-mounted displays, will most likely help virtual reality take its place among more mainstream treatments, say researchers.

Virtual reality generally involves a computer-generated, multidimensional sensory environment that users experience via interface tools that enable them to immerse themselves in the environment, navigate within it and interact with objects and characters inhabiting the environment.

Virtually Better Inc., a company co-founded by Barbara Rothbaum, director of the Trauma and Anxiety Recovery Program at Emory University School of Medicine in Atlanta, creates virtual reality environments for use in the treatment of anxiety disorders.

"For most of our applications, we use a head-mounted display that's kind of like a helmet with a television screen in front of each eye and has position trackers and sensors," says Rothbaum. "And for most environments, we have earphones as well. And [some] people hold a handheld device and can manipulate their environment."

In SnowWorld, the first virtual environment designed specifically for treating burn victims, patients undergoing painful treatments can fly through an icy canyon with a frigid river and waterfall and shoot snowballs at snowmen, igloos, robots and penguins standing on narrow ice shelves or floating in a river.

The virtual reality treatment is successful because the patient's attention is no longer focused on the wound or the pain, but rather on the virtual world, says SnowWorld's developer, Hunter Hoffman, director of the Virtual Reality Analgesia Research Center at the University of Washington Human Interface Technology Laboratory in Seattle.

FUTURE WATCH

Austin Mackay sings the praises of the technology. Mackay, 25, is a patient of David Patterson, a clinical psychologist who treats burn patients at the Harborview Burn Center in Seattle.

Mackay's right arm, right flank and rib cage sustained third-degree burns in a fire last September. He initially participated in a regular physical therapy regimen.

"With the physical therapist, it was pretty painful but not intolerable," he said. "I volunteered to do the VR for one day for the research. It was a lot more fun than regular physical therapy because it took my mind off what I was doing. It pretty much blocked out the pain of my movement during my rehabilitation.

"I didn't even really conceive that they were doing my physical therapy. I was just really involved in the game," Mackay says.

While the medical applications of virtual reality are promising, more needs to be done before it will become a widely accepted and practiced clinical treatment.

"The innovators in medical VR will be called upon to refine technical efficiency and increase physical and psychological comfort and capability while keeping an eye to reducing costs for health care," says research scientist Walter Greenleaf, president of Greenleaf Medical Group.

Greenleaf Medical is a Palo Alto, Calif.-based consortium of companies working to advance the development of new technologies in medicine.

Virtually Better President and CEO Ken Graap says he thinks companies will make wireless trackers — devices that measure movement and translate it into computer commands — and introduce better-resolution head-mounted displays with wider fields of view within the next five years.

"Now we're dealing with head-mounted displays with fields of view that are about 28 degrees, and that's a pretty narrow field of view. In addition, the prices will decline," Graap says. "There are commercial ones that are available now that have 60-degree and 140-degree fields of view, but they're $20,000 to $140,000."

"Most of this technology is driven by the game industry," Rothbaum says. "Currently, there's not a huge demand for [head-mounted displays], so I'm hoping those get better, lighter, have better resolution and are cheaper."

VR for the Home

Graap says that within the next five years, virtual reality technology will become wireless and patients won't have to be tethered to a computer — allowing them to be treated at home.

"[I] can envision people having a station at home and being connected through a telepresence to a therapist," he says. "So in one window, there's a therapist who's encouraging the patient or helping control the desktop, and in the other window, there's the person who's receiving help."

Research scientist Skip Rizzo says that avatars — humanoid figures in a virtual or computer space — will take on more and more humanlike qualities.

"As they evolve, they will move less like robots and more like people," says Rizzo, a research assistant professor at the University of Southern California's Institute for Creative Technologies and School of Gerontology in Marina del Rey.

"I think within the next five years, there will be an integration of speech programs so the avatar will understand what a person says and process it," says Rizzo. "The avatar will interact at a very high level with people." ⓒ 528478

COMPUTERWORLD

Security Conference Leads to New Initiative

Our security manager attends the RSA Conference and finds more than just buzz over virus gateways. By Mathias Thurman

SECURITY MANAGER'S JOURNAL

I HAD THE OPPORTUNITY to spend almost a week at this year's RSA Conference in San Francisco. Of all the information security conferences, I enjoy this one the most. It combines an abundance of informative seminars covering various technical levels with a floor show of leading-edge vendors showing off new products and enhancements. What sets it apart is the breadth of the seminars and the quality of the presenters. Many are industry leaders who, rather than trying to sell a product, are there merely to educate attendees on particular subjects. (That's not to say that there weren't the occasional product pitches.)

I like to talk with vendors to learn about new technologies, but mostly I'm hoping to validate decisions I have already made. For example, we selected RSA Security Inc. for our two-factor authentication. After visiting competing vendors, I was satisfied that RSA was the right choice for our deployment.

Another decision was to go with Guidance Software Inc. in Pasadena, Calif., for what I consider to be the leading forensics software on the market. At this conference, I had the opportunity to review the upcoming Version 5.0 of its Encase product line, and I was very impressed with the list of enhancements.

It seems as if each year a technology theme colors the conference. Last year, it was identity management. This year, the buzz was for virus gateways. This was timely. Malicious code has been entering our network, and virus gateways seem to be the answer.

Some background: We recently segmented areas of our network according to the nature of the infrastructure we're protecting. For example, since our wireless network is susceptible to various attacks, we segmented it so that users are on a network with no logical relationship to other areas of the infrastructure.

Another network houses our financial systems and is segmented from other areas because of the sensitivity of the data. There are other segments for desktops, databases, revenue-generating systems, monitoring systems, security infrastructure, development, executive staff and the legal, accounting, and sales and marketing departments.

This segmentation lets us protect users and control what they can access. For example, we created a network for our PeopleSoft application and one for our human resources department. The firewall rules restrict PeopleSoft administrative activities to the HR network, which is a very clean rule. We can deal with exceptions on a case-by-case basis.

> **Malicious code has been entering our network, and virus gateways seem to be the answer.**

The self-service interface for employees remains open to almost all networks, but we control access to administrative areas. If an employee in the finance department needs administrative access to the PeopleSoft application, we can easily deal with his case with a point solution.

So malicious code affects us only in certain areas. Since we control the profile of servers for our productioo network and most desktops, we don't typically have problems there. We have some mail gateways that do a great job of filtering the traffic, and antivirus software is installed on desktops.

Problem Networks

The problem is with networks that are more open but still have a logical relationship with the rest of the company. Labs are a perfect example. Many of our lab resources aren't patched, don't have virus protection and are otherwise unprotected from unauthorized activity.

Another example: We offer Digital Subscriber Line service to employees who work from home. Our DSL network is a private circuit that allows users to be directly connected to the network. Naturally, they attach their home desktops, wireless access points and who knows what else to this network. We can't control which devices are attached to the network, and thus we're susceptible to infection.

Eventually, we'll configure the network to restrict access to authorized devices, but this type of deployment is very time-consuming and resource-intensive. In the interim, we're looking at a gateway product that can protect these problem networks from the most common and damaging attacks.

Fortinet Inc. in Sunnyvale, Calif., seems to have just what we're looking for. Its device can provide real-time antivirus protection, firewall capabilities and network intrusion detection and prevention at the same time.

Fortinet also has a "stealth" mode, so we don't have to interrupt or worry about other firewall or router rules. This is ideal, because in my company, the network team manages the firewalls, and it was concerned that with gateway products, two groups would be managing firewalls. (Personally, I think that information security should be in charge of firewalls, but that's another story.)

Therefore, we probably won't use these devices as a firewall or virtual private network, since that's handled by the network team. But we will use them for virus and malicious-code detection and prevention. The devices will not only detect and prevent viruses coming across the wire, but also discover other types of malicious code, such as worms and Trojan horses. The devices can also be configured to reject traffic that contains a malicious payload. We'll have to experimeot, of course, because we don't want a false positive to obstruct legitimate traffic.

At the end of the day, I believe we can address these network-segmentation issues with a robust system that will protect the rest of the organization.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussion in our forum. QuickLink a1590

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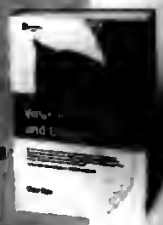

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Sonic Ships New SOA Infrastructure

■ Sonic Software Corp. in Bedford Mass., last week announced Sonic 6.1, which extends its service-oriented architecture infrastructure line with two new products: the Sonic Collaboration Server for managing partner interactions, and the Sonic Database Service, which simplifies access and reuse of relational data sources. Enhancements to Sonic Enterprise Service Bus and the Sonic Workbench in Release 6.1 increase SOA development productivity with a new uniform service-invocation model, said Sonic. Pricing wasn't announced.

CipherTrust Adds E-mail Compliance

■ Messaging security vendor CipherTrust Inc. in Alpharetta, Ga., has added compliance-control capabilities to its IronMail 5.0 e-mail security appliance to make it easier for corporate users to comply with federal regulations. The added tools will let businesses detect and control private and regulated content transmitted via e-mail with minimal deployment and administrative concerns, said CipherTrust. The new features will be available in the devices this month. IronMail 5.0 starts at $4,995 for up to 1,000 users or $20,000 for large enterprises.

IBM Console Gains Storage Manager

■ IBM has announced that it has deployed Tivoli Storage Manager on its Integrated Solutions Console, which is an autonomic computing technology designed to help IT administrators aggregate various user interfaces into a single console. The console can accelerate software deployment and simplify usability of various applications, according to IBM. The console is based on WebSphere Portal technology and J2EE, and it can be used to manage IBM and non-IBM software products. Pricing wasn't announced.

CURT A. MONASH

Computing the Right Pitch

OF ALL THE HOT AREAS in enterprise software technology, perhaps the hardest to master is predictive analytics. Still, it's an increasingly important area to understand, for sellers and buyers/consumers alike, so let's give it a shot.

First, we need a working definition. The meaning of the marketing buzzphrase "predictive analytics" is still mutating fairly rapidly. But in essence it's a replacement phrase for "data mining" and roughly equates to "applications of machine learning and/or statistical analysis to business decisions."

In most current and near-future applications, the business decision is some form of small-group marketing. (In the ideal case, the group size is one, and predictive analytics is used to make wholly individualized marketing offers.) Questions that predictive analytics attempts to answer include.

■ Which of my customers are likely to churn?

■ What kinds of offers will persuade my customers to stay or new customers to buy? Price? Service options?

■ Which potential customers are likely to be highly profitable? Which are likely to commit fraud and actually cost me money? Which are likely to soon be threats to churn, causing me to make lowball bids to keep them?

■ What should I show this surfer when I serve the next page?

The answers to these questions are then reflected in specific choices of call center scripts, direct-mail sublists, Web site personalization and the like.

Data used to answer such questions can come from a variety of sources. Most obviously, there's transactional data recording what customers bought, how much they spent and so on. There also are other customer contacts, such as call center logs, incoming e-mail (text data mining is red-hot) and any forms or surveys they filled out. Industries with loyalty programs, such as airlines and gaming, have huge amounts of additional data to mine. So do companies whose Web sites produce site logs. Finally, vast amounts of third-party data can be added to the analytic mix. Indeed, credit bureaus maintain more than 1,000 columns of data on consumers that can be rented by anybody planning a marketing campaign.

The real complexity lies in the mathematical techniques used to answer predictive questions. Usually, the problem is formalized as one of classification or clustering. For example, "Divide prospects into two classes: those likely to commit fraud and those unlikely to." Or, "Divide customers into no more than 10 groups, aligned according to which kind of marketing promotion they are most likely to respond to." More precisely, an "answer" is an algorithm that will assign each customer or prospect to one of a limited number of buckets. The evidence used to construct this algorithm is data on previous customers and prospects. That evidence may include information as to which bucket they best fit into.

Finding such algorithms is hard and goes far beyond normal statistical methods. Techniques involved include neural networks, an improvement on neural networks called support-vector machines and some pretty sophisticated linear algebra. It's rarely obvious at the outset what algorithm is best for a specific problem, and the best one is often a complex hierarchy of "elementary" algorithms that themselves are difficult to comprehend. (A couple of vendors claim that one-size-fits-all algorithms are right around the corner. Don't believe them.) Consequently, professional statisticians almost always get involved early in the classification process.

The good news is that once the statisticians have worked their magic, they produce a black box that works for a specific classification task — data in, customer ratings/groupings out. Mathematically adept marketing managers can use it to test hypotheses, plan campaigns and so on. Increasingly, such systems are used iteratively — plan and implement a quick campaign, observe the results, recalibrate the conclusions and try again. And they perform well enough to be used inline (i.e., in real time) to personalize Web pages and call-center scripts. (The key standard for inline analytics is Predictive Marketing Markup Language.)

Indeed, all of this works smoothly enough that in a few areas, predictive analytics apps are available from statistical software vendors such as SPSS and SAS Institute and from ERP/CRM vendors such as Oracle and SAP.

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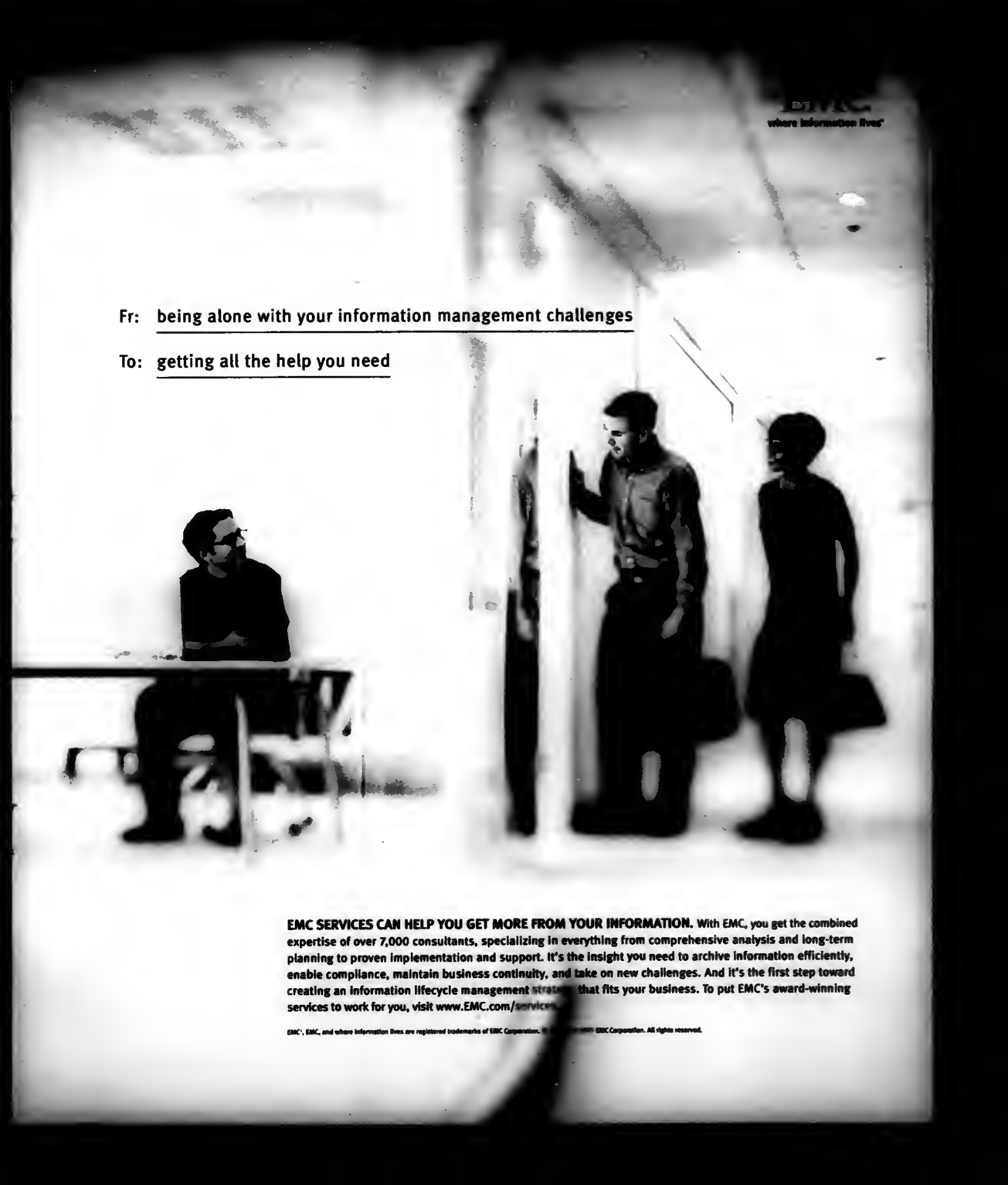

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IT MENTOR
Stacked Deck?
IT Mentor and former CIO John Kost says organizational attitudes, structures and cultures can doom a CIO to failure. He offers a quiz to gauge your chances of success. **Page 42**

OPINION
Share the Spoils
Helping your suppliers reduce costs takes time and effort, but it can make you a preferred customer, says Bart Perkins. And it can save you money, too. **Page 50**

Career Watch
Auto Warehousing CIO Dale N. Frantz offers advice on making an IT organization less average and discusses the value of an MBA. Plus, we look at the University of Miami's IT Executive Institute, tech skills that are in demand this year, and the chance for software developers to travel into space. **Page 49**

MAKING THE Leap

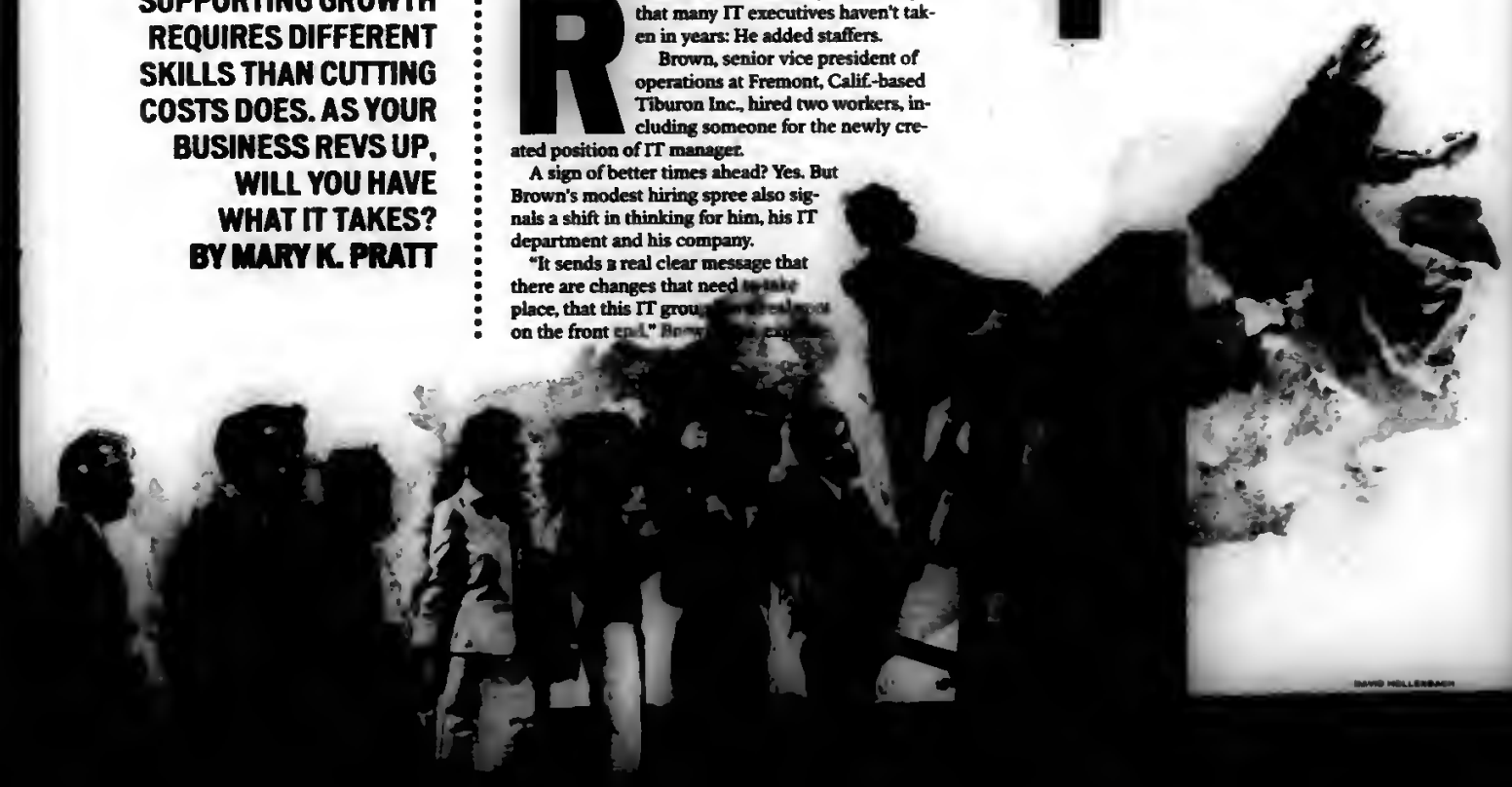
SUPPORTING GROWTH REQUIRES DIFFERENT SKILLS THAN CUTTING COSTS DOES. AS YOUR BUSINESS REVS UP, WILL YOU HAVE WHAT IT TAKES?
BY MARY K. PRATT

ROBERT BROWN recently took a step that many IT executives haven't taken in years: He added staffers.

Brown, senior vice president of operations at Fremont, Calif.-based Tiburon Inc., hired two workers, including someone for the newly created position of IT manager.

A sign of better times ahead? Yes. But Brown's modest hiring spree also signals a shift in thinking for him, his IT department and his company.

"It sends a real clear message that there are changes that need to take place, that this IT grou[illegible] on the front end," Brown [illegible]



ing that his staff and the business units must work together to reach common company goals.

Industry studies and IT leaders alike report that after several years of cutting costs, CIOs now need to focus on supporting business growth. But IT execs must contend with a number of challenges as they make the leap. And while industry leaders say some CIOs won't have the skills needed to make it, they also point out that many are already rethinking and restructuring IT's role within organizations.

"There's no way to keep things [at the] status quo," says Karenann Terrell, vice president and CIO of Chrysler Group and Mercedes-Benz North America at DaimlerChrysler Corp. in Auburn Hills, Mich. "If you're going to make the transition to business value, IT can't just learn the vernacular, the vocabulary of the business. They have to do things with and for the business that are different."

That's a tall order for many IT executives. According to Stamford, Conn.-based Gartner Inc., the intense focus on cost-cutting has weakened IT leadership, fostered silo behavior, created competing agendas and dampened the creative spark in IT. As a result, IT has become risk-averse.

Gartner concluded in a July 2004 report that few IT management teams are well positioned, in terms of the breadth and depth of their capabilities as leadership teams, to deal with the challenges of growth, change and innovation.

But CIOs know they need to change, says Gartner analyst Mark P. McDonald. "Many CIOs will be focused on building up their business and leadership skills," he says.

In an environment where CIOs aren't going to get a lot of seed money — a January Gartner report says IT budgets will grow by only 2.5% this year — CIOs need to build their reputations as leaders by "being much more explicit about what their contributions are," McDonald says. He points to one CIO who, in summarizing progress following a corporate merger, reported the actual dollar value of the IT department's work rather than more traditional measurements such as the number of customer records moved to the new merged systems.

Realignment

CIOs need to realign themselves and their staffs with their companies' overall mission. "We used to say that in IT, you enable the business. Now you have to contribute," says Jean K. Holley, senior vice president and CIO of Tellabs Inc. in Naperville, Ill.

Holley has taken steps to change the culture of her IT department. First, its name was changed from the IT group to Global Information Services. Then, in December, she created the Business Relationship Management Group, which she describes as a collection of tech workers who sit in business meetings and "help figure out how we can contribute." And now Holley expects programmers to analyze costs and returns on investment instead of leaving it to business units.

This shift in thinking won't happen overnight for most CIOs, says Pamela Taylor, marketing director at Share, a Chicago-based nonprofit organization of IBM users. "There really is a training element involved," says Taylor, whose day job is in standards and strategic technologies at a subsidiary of a Fortune 50 company. "It is a matter of education for the staff in the technologies that are going to support the changes [brought about by growth]. It's a matter of introducing a new vocabulary — both technical and business — within the organization and having that permeate everything they do."

For example, Share's symposium in Boston this August will concentrate on helping IT managers respond effectively to the ever-changing business environment, align IT to the business needs to create a competitive advantage for their companies, manage complex corporate IT infrastructures with limited resources, make business integration work across information silos and conform to evolving rules and regulations.

"The savvy people understand what they need to learn," says Janet Cohen, executive director of the CIO Institute and chief operating officer of the H. John Heinz III School of Public Policy and Management, both at Carnegie Mellon University.

CIOs today need to understand finance, strategy, business process re-engineering and organizational behavior. They need to be able to communicate with a variety of audiences and to measure the value of IT, according to Cohen. Some CIOs are getting MBAs, taking courses or learning on the job to gain the necessary skills, Cohen adds.

Terrell also sees CIOs focusing on these topics through formal and informal networks. She recently attended a CIO summit where the 200 or so attendees listened to keynote speakers talk about the new posture of IT in corporate America. "The entire buzz of the conference was, 'You have a seat at the table. Now what do you do with it?' " she says.

Business Advice

IT needs to help the business understand how technology can support growth, Terrell says. And it must measure progress like other business units. For example, instead of looking at system availability and hours on projects, she now reports on customer satisfaction and whether projects achieve business goals.

On-the-job training often beats classroom education, Terrell says. She cites her IT group's experience implementing compliance policies for the Sarbanes-Oxley Act. Terrell put IT and business people together to get the job done, something she found much more effective than classroom lectures. "The understanding is going to come in the new responsibilities we have to take on," she explains.

Andy Roach, CIO at Ketchum Inc. in Pittsburgh, has restructured his IT group to reflect that philosophy. Several years ago, he created four disciplines for his department: financial/procurement, technology, applications and internal customer service. This has helped Roach control costs while responding to business needs. "I'm not making decisions that aren't bringing efficiencies and creating revenue," he says. Case in point: The IT group, responding to needs articulated by the business side, drove an investment in handhelds for the staff.

CIOs now have the overriding challenge of meeting the following competing demands: supporting business growth, adopting new measurements of success, developing vocabularies, educating staffers on business needs and keeping costs down.

"It puts additional responsibility on the CIO to communicate effectively and be able to explain in simple terms what is happening," says John R. Dick, executive vice president and CIO at Regions Financial Corp. in Birmingham, Ala.

Dick, who oversees IT workers in about a half-dozen locations, must help his bank drive sales while supporting mergers with other banks — all with a budget that's nearly flat.

To do that, he established the Regions Technology Priority Map, a spreadsheet outlining priorities related to mergers, operations, system enhancements and the like. He holds quarterly virtual meetings that include all 1,000 IT workers. And staffers attend classes focused on the business of banking.

Dick also created business information officers, who are technologists aligned with specific business divisions. "They help us navigate priorities with ongoing daily communications," he explains. "They keep in lock step with the business, making sure IT resources are being brought to bear on the right issues."

And, as they move ahead, that's really the goal all CIOs need to reach. **52840**

Pratt is a Computerworld contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.

SUNGARD

CHRIS HARTLOVE

STACKED DECK?

Many organizations unwittingly set up the CIO to fail. Here's how to gauge your chances of success.

BY JOHN KOST

IT MENTOR

I'VE LONG BEEN concerned about the extraordinarily high turnover rate among government CIOs, so I was glad for the opportunity to spearhead some Gartner research on the subject. Since I had served as CIO for the state of Michigan from 1992 to 1996 and have worked with many government agencies in helping them create their CIO positions, I was particularly interested in the government sector. But I suspect much of what we learned applies equally to CIOs in business.

What has become apparent in this turnover rate is that the individual qualifications of the CIO are rarely the major determinant of success. Almost all who get to that level of an organization are quite competent. The bigger question in many organizations is whether the executives above the CIO truly understand the role, how to make it effective and how their own success might depend upon the success of the CIO.

Continued on page 44

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Continued from page 42

Critical to the success of the public sector CIO, and almost certainly to the commercial-sector CIO, is how well the position is accepted in the overall culture of the organization. Is the position, or its occupant, adding value? Does the position report to someone who actually understands the role that IT plays in the success of the organization? Is the CIO part of the decision-making processes of the organization or simply a technician responsible for keeping the lights on?

These and other questions are key indicators of whether the CIO, regardless of individual strengths and weaknesses, has a chance to succeed. Here's a quiz to gauge where the CIO in your organization stands.

WHAT IS THE CIO'S RELATIONSHIP WITH THE CEO?

(1) The CEO has only occasional contact with the CIO.
(2) The CEO was highly involved in the selection of the CIO but was unacquainted with the candidate prior to selection.
(3) The CEO knew the CIO for some time before becoming CEO and was active in the CIO selection process.

WHAT IS THE MANAGERIAL LANDSCAPE AROUND THE CIO?

(1) The CIO reports to an individual who has little awareness of technology and prefers to avoid it.
(2) The CIO reports to an individual who is aware of the importance of managerial processes but tends to avoid active involvement in them.
(3) The person to whom the CIO reports is a hands-on executive.

WHAT IS THE CIO'S ROLE IN IT PROCESSES SUCH AS BUDGETING, PROCUREMENT AND HUMAN RESOURCES DECISIONS RELATED TO IT?

(1) The CIO isn't in the critical path for decisions related to funding, acquisitions or hiring.
(2) The CIO approves or plays a major advisory role in all IT projects but doesn't have approval authority over specific budgeting, procurement and human resources decisions.
(3) The CIO has direct approval authority in budgeting and procurement of IT for the organization, as well as approval for all technology hiring, retention and training.

WHAT IS THE CIO'S OPERATIONAL RESPONSIBILITY?

(1) The CIO is largely a policy position and doesn't own any part of the IT infrastructure.
(2) The CIO owns some of the day-to-day operations of the IT infrastructure, but operating agencies within the organization also own portions of the infrastructure.
(3) The CIO owns all of the day-to-day operations of IT, including computing, networking, portals and management of other large capital assets, or the CIO is responsible for the organization's IT sourcing strategy.

WHAT IS THE ORGANIZATION'S TIME FRAME FOR CHANGE?

(1) Business units have no change agenda and are content with gradual, incremental change.
(2) The organization has objectives but hasn't set clear deadlines or assigned accountability for achieving them.
(3) The organization has aggressive objectives and has little flexibility in the deadlines for achieving them.

HOW IS THE IT ORGANIZATION FUNDED?

(1) The IT organization is funded directly through its own operations and capital budgets.
(2) The IT organization is funded through a dedicated budget and by its customers.
(3) The IT organization is funded almost entirely by its customers.

WHAT ROLE DOES IT PLAY IN THE BUSINESS AGENDA?

(1) There is no connection between the agenda of the business and the IT organization.
(2) The business has acknowledged the importance of the IT organization in achieving its agenda but hasn't yet provided the necessary resources.
(3) The future of the business is dependent on the IT organization, and the operating units in the organization know it.

HOW DOES THE ORGANIZATION VIEW THE CIO?

(1) The IT group remains fragmented within the organization, and obtaining the consent of the CIO is seen as a low-value approval step.
(2) The CIO is part of the decision hierarchy, but the position has little credibility among the operating units.
(3) The organization routinely includes the CIO as a critical player in major decisions.

WHO OWNS PROJECT MANAGEMENT?

(1) Major IT projects belong to the business units, and the CIO plays little or no role in their management.
(2) The CIO provides occasional oversight of projects but lacks the authority to cancel or alter their course.
(3) The CIO is accountable for the success of all high-risk IT projects and has the necessary resources to make certain they are managed appropriately or can be canceled.

WHAT IS THE STATUS OF THE ENTERPRISE ARCHITECTURE?

(1) There is no enterprise architecture.
(2) An enterprise architecture has been proposed but compliance is voluntary.
(3) The CIO has the authority to create, implement and enforce an enterprise architecture — and the funding needed to do so.

WHAT ROLE DOES THE CIO PLAY IN STRATEGIC PLANNING?

(1) There is no business-strategy planning process for the organization.
(2) There is no business-oriented strategic planning process, but there is an IT strategy planning process.
(3) The organization has a business-oriented strategic planning process in which the CIO plays an integral role.

HOW STABLE IS THE CIO POSITION?

(1) The CIO position is newly created and/or doesn't play a significant role in senior management decisions.
(2) The CIO position is an effective position, though that effectiveness is largely driven by the personalities of the CEO and CIO.
(3) The CIO position is established in the organization and plays a significant role in senior management. **ID 52613**

SCORING

LOW PROBABILITY OF SUCCESS.

MODERATE PROBABILITY OF SUCCESS.

30 TO 36: HIGH PROBABILITY OF SUCCESS.

Kost is managing vice president at Gartner Inc. Contact him at John.Kost@Gartner.com.

Continued from page 42

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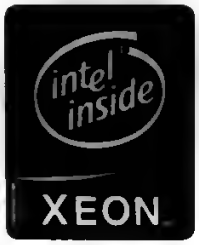

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Career Watch

Our IT organization has gone through a variety of transformations, and we have an average reputation with the rest of the company. We're moving to a charge-for-service structure, and our first objective is to have the business units pay for the customizations to our ERP system that they request. Is this a common practice, or does IT generally budget for the customizations at the beginning of the year? I have seen both approaches. Rather than addressing how your services are underwritten, however, I would be most concerned with upgrading your image within the company. Examine what your IT organization is doing that is resulting in this "average reputation." When you begin to charge the other business units for average service, they will begin to press company leadership to allow them to get competitive bids via outsourcing – and they would be right to do so. This is one of the greatest threats in our industry today. Who wants to pay for average service? I would invest time in meeting with the various business units in advance to find out why they view your IT organization as average, and then begin to transform your department's service to a higher level. Once you start to sell your services to the individual business units, you will find that their demand for excellent service will increase dramatically, and that could threaten your department's existence as you know it today.

I'm 28 years old and an account executive for an independent insurance agency in Texas. I earned a bachelor's degree in business administration in 2003. I want to get an MBA in technology or computer information systems. What would I expect if I completed one of these programs? I'm interested in being a technology manager, but I hope to begin with an entry-level job in the technology sector while I pursue an MBA. The short answer is that you will encounter a very tough job market right now, and an MBA alone won't get you in the door at most companies. The fact that your experience to date isn't in IT will hinder you somewhat. You must answer the question, "Why do I want to be a technology manager?" Are you more interested in the technology part or the manager part? If you have a passion for technology, then your plan to begin with an entry-level job in technology is sound. However, if you are more interested in being a manager and go into the entry-level tech job with the view that it is temporary and that the door to management will be unlocked by the MBA, you might be in for a surprise. If your desire is for technology, then you will pursue any tech job with tenacity, and your enthusiasm should be noticed by your superiors. Advancement in technology to a management position is usually produced through a proven track record of achievement coupled with the respect of your peers. An MBA is an important credential that will enhance your portfolio, but it isn't a substitute for proven job performance. ● 82794

Flexible Schooling For CIOs

SUCCESSFUL CIOS HAVE to be flexible, and flexibility is a quality they probably appreciate in others. So chances are that many IT leaders will like the course offerings from the University of Miami's IT Executive Institute, or ITEx. CIOs and their direct reports can take classes at the university's Florida campuses, at their own sites or at third-party sites near their operations. Course work is offered in areas such as advanced IT leadership, communicating successfully, using IT metrics, change management and the Sarbanes-Oxley Act, but each course can be modified to suit clients' needs. Says co-director Joe Donahoe, "ITEx was created to address the growing need for education and professional development for IT executives and other executives that rely on IT to advance their businesses." The institute is a sister to the NSU Information Systems Institute, a 20-year-old training center within the University of Miami information technology division. More information is available at www.miami.edu/itex.

Career Watch

ASK A PREMIER 100 LEADER

Dale N. Frantz

TLE CIO

COMPANY Auto Warehousing Co., Tacoma, Wash

Frantz is this month's guest Premier 100 IT Leader, answering readers' questions about charge-for-service models and the value of an MBA. If you have a question you'd like to pose to one of our Premier 100 IT Leaders, send it to askaleader@computerworld.com, and watch for this column each month.

Our IT organization has gone through a variety of transformations, and we have an average reputation with the rest of the company. We're moving to a charge-for-service structure, and our first objective is to have the business units pay for the customizations to our ERP system that they request. Is this a common practice, or does IT generally budget for the customizations at the beginning of the year? I have seen both approaches. Rather than addressing how your services are underwritten, however, I would be most concerned with upgrading your image within the company. Examine what your IT organization is doing that is resulting in this "average reputation." When you begin to charge the other business units for average service, they will begin to press company leadership to allow them to get competitive bids via outsourcing – and they would be right to do so. This is one of the greatest threats in our industry today. Who wants to pay for average service? I would invest time in meeting with the various business units in advance to find out why they view your IT organization as average, and then begin to transform your department's service to a higher level. Once you start to sell your services to the individual business units you will find that their demand for excellent service will increase dramatically, and that could threaten your department's existence as you know it today.

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MOST-SOUGHT IT SKILLS

FORRESTER RESEARCH INC. foresees an IT skills shortage in several key areas this year. It projects that IT staffing will increase by 2% in 2005. And while it acknowledges that offshore outsourcing will have some effect on IT staffing levels in the U.S., in a survey of North American and European companies last year, it found that more than two-thirds of respondents claim to have no plans to engage in outsourcing. The following is a list of the types of IT professionals that the Cambridge, Mass.-based research firm says will be most in demand this year:

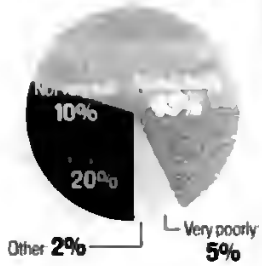
- **Enterprise architects,** as companies rationalize, consolidate and simplify their IT infrastructures.
- **Business analysts/relationship managers,** who are able to move comfortably between the business and technology sides of a company.
- **Security specialists,** especially those with CISSP and/or CISM/CISA certifications.
- **Web services specialists,** as applications are increasingly built using this architecture.
- **Linux and open-source specialists,** as this movement "gains momentum every day."
- **Agile programmers,** as agile processes become widely adopted.
- **Business intelligence/Web-enabled analytics specialists,** as companies move to turn their storehouses of data into usable knowledge.
- **Business process modeling specialists,** as companies strive to gain competitive advantage by quickly modeling and automating business processes. – *Jamie Eckle*

QUICK HITS

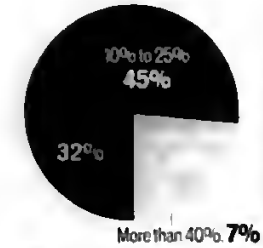
How much of your IT budget is dedicated to ensuring solid project management and governance practices?

Does your organization have some sort of business-case policy in place to justify major investments?

How well does your organization manage projects?



What percentage of your organization's program initiatives are redundant?



BASE. 300 project executives attending Project World and PMI conferences in the fall of 2004

Share the Spoils

FACE IT: Your suppliers' costs are your costs. While you can't directly affect their R&D, marketing or raw materials outlays, you can significantly affect their sales and delivery expenses. In return for reducing your suppliers' costs, you should expect lower prices and more consistent service.

The sales process is very expensive for both buyer and seller. Established low-growth software firms typically spend 20% to 25% of revenue on sales and marketing. High-growth firms often spend as much as 40% to 60%. Here's how you can help reduce your suppliers' sales costs:

BART PERKINS is managing partner at Louisville, Ky.-based Leverage Partners Inc., which helps organizations invest well in IT. He was previously CIO at Tricon Global Restaurants Inc. and Dole Food Co. Contact him at BartPerkins@LeveragePartners.com.

- **Be specific.** Before you contact potential suppliers, define project parameters (objectives, scope, schedule, etc.) as clearly as possible. Suppliers will waste less time guessing what you want and will build less contingency cost (stated or unstated) into the contract.
- **Be honest.** If you have no intention of purchasing, tell the supplier upfront. Allow it to focus its sales efforts on other prospective customers.
- **Be consistent.** Don't change your mind unless absolutely necessary. Reworking a proposal costs both sides time and money.
- **Limit requests for proposals.** Use formal RFPs only for large projects or for projects where preferred suppliers are unable to deliver. RFPs are expensive to create, expensive for suppliers to answer and expensive to analyze.
- **Negotiate master agreements.** A standard master agreement allows you to focus on project-specific negotiations, rather than on standard contract terms and conditions (liability, insurance, nondisclosure, etc.).
- **Centralize buying.** A central vendor management group standardizes and streamlines buying processes. It also helps vendors focus sales efforts and reduces duplicate vendor cold calls.
- **Help trusted suppliers sell.** Introduce valued suppliers to potential buyers within your company. This reduces the supplier's sales costs. Moreover, if your supplier is selected, you benefit from working with a known entity.

You can also affect the supplier's delivery costs. Reducing these will win you points with your supplier and should place you in a favorable negotiating position for subsequent contracts. Here's how:

- **Standardize configurations.** One client supported 21 custom desktop and laptop configurations. Its reseller had to carry significant inventory for each configuration. Standardizing on eight configurations saved the reseller huge inventory costs and reduced installation, training and troubleshooting time. The standardization saved the client 12% of its overall PC costs.
- **Standardize software.** Industry-standard products are less expensive than proprietary ones. They require less support and less custom software to interact with other products. Eliminating custom interfaces reduces costs.
- **Develop realistic work plans.** IT suppliers attempt to keep their people consistently busy and billable. When project demands change abruptly, the supplier may be unable to manage staffing levels efficiently, and your costs (or schedules) may increase.
- **Limit changes.** Changes made after the contract is signed create additional work for your supplier. The resulting increase in supplier cost is usually passed back as change-order fees.
- **Forecast accurately.** One client wanted to order new PCs until the day before they were needed. Since the customer's needs were unpredictable (300 PCs one month, 10 the next), the supplier was forced to maintain a large on-site inventory at considerable expense. Better forecasting reduced the client's carrying costs by 30%.
- **Fix broken processes.** In general, complexity results in cost. If you need to streamline or re-engineer, do so *before* you outsource, to reduce complexity for your supplier.
- **Streamline administration.** Most organizations have procedures to manage suppliers. Make sure your supplier-tracking and -monitoring processes are accurate, but don't create unnecessary overhead for suppliers.

Meet with your suppliers to review cost structures and explore opportunities for savings. Offer to help reduce their costs in exchange for a share of the resulting savings. This approach requires time and effort; you will probably make this investment only for your most important suppliers. But the savings can be significant.

Creating true partnerships with your suppliers has many benefits beyond financial return. Your willingness to work with them for mutual advantage will set you apart from other customers. Moreover, it will encourage your suppliers to go the extra mile for you when those unforeseen but inevitable difficulties occur down the road. Leverage this opportunity to work more effectively with your most-valued suppliers. **52612**

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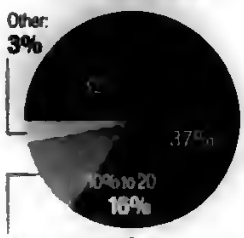
QUICK HITS

How much of your IT budget is dedicated to ensuring solid project management and governance practices?



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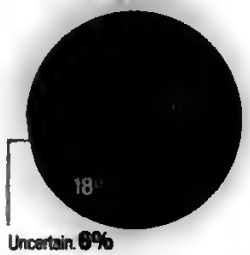

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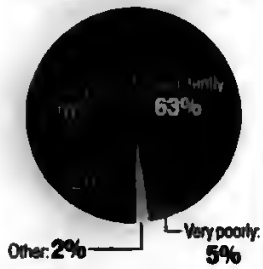

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SOURCE: ROBBINS-GIOIA, LLC, ALEXANDRIA, VA

BART PERKINS

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Advertising Supplement

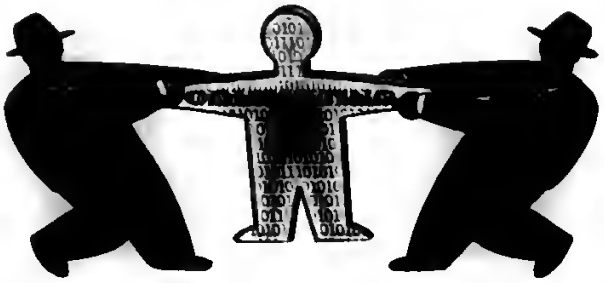
IT Careers in Consulting: Demand Spirals

Demand is up and continuing to spiral for information technology consultants, with major firms listing literally hundreds of job openings for entry level programmers and developers through senior consulting ranks. And while firms list specific technical skills, most agree that the true art of consulting is the primary requirement.

Accenture's Digital Forum indicates that SAP skills are a top priority, paired with consulting competencies and capabilities. Other technical skills in demand are PeopleSoft, Oracle and Seibel. John Campagnino, Accenture's global director of recruiting, says in the forum that demand is as robust as ever.

Jonathan Bauer, a principal at Deloitte Consulting in the IT practice, says companies are investing in IT again. "You can only stop investing so long before you have to get back to basic enhancements. Select large engagements are re-emerging, and IT organizations within companies are looking at themselves and making sure they are well positioned from a skill and process capability," Bauer says. To support these clients, "we are hiring as fast as we can find qualified people and have been in that mode for almost a year."

Bauer predicts a 50% growth in hiring at Deloitte in 2005. The firm hires individuals with a strong industry background, paired with professional IT skills. "We need even campus hires (graduate students) to have clear, crisp communication and the ability to decompose and analyze problems and situations and to know when to say 'I don't know'." Bauer says these consulting skills – good judgment, good presence, knowing when to say no – are much more difficult to teach and, therefore, are absolute requirements for those hired at Deloitte



Liz Miller, senior recruiting manager for Booz Allen Hamilton, echoes Bauer but says there are some specific technology trends in demand – Java, J2EE, XML, Cold Fusion and Oracle spatial skills. "There is a lot of demand for these kinds of geographic information systems," she says. "Because we're so much in the public sector, we look for folks who have a strong background in systems and infrastructure, but who also have security clearances." Miller says Booz Allen Hamilton's priority is to hire people who can dig in to understand a problem, analyze and truly do consulting. "We need someone who knows a variety of technologies and can give an objective evaluation to a client for a capability. There's a more heightened focus also on consulting and communication skills. There is no super hot issue, such as Y2K out there so we need people who can help businesses and agencies gain ability and agility."

The Boston Consulting Group also is hiring following a particularly strong year in 2004. "The pipeline is full," says Craig Lawton, vice president/director-Americas Information Technology Practice. "Our biggest obstacle to growth is finding high quality people. We need technical aptitude plus consulting skills. We have to make up for people we didn't hire in the past two years, to fill the middle of our pyramid. And there's tremendous competition for these people."

BCG has focused on making consulting a more attractive career. Much more of strategy development takes place in the office vs. on site with clients, and as with most consulting firms, BCG has gone to four-day on site vs. five days a week. "We also found that it's important to help people through different phases – the birth of a child, marriage, taking care of parents. During those phases we try to allow consultants to work on intellectual capital assignments, to go part-time if need be. If we help them through life-changing events by being flexible, then they can manage their careers better."

For more information about IT Careers advertising, please call: 800.762.2977

Produced by Carole R. Hedden

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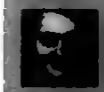

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VB6 Support

Morgan Haueisen, a principal engineer at the Royston, Ga.-based consumer products division of Johnson & Johnson.

Haueisen, who signed the petition, said his division "couldn't live without" 15 VB6 applications that have an average of 44,000 lines of code apiece. Haueisen said he tried to convert a simple application to Microsoft's newer VB.Net environment, but despite hours of work, he wasn't able to get it to run because VB6 and VB.Net have some differing functions and he couldn't find the comparable functions in VB.Net.

Migrating the applications would take "a major, major amount of time," Haueisen said. "You'd have to start doing all that over again, and

that's just not feasible."

Two of 28 VB users who responded to an e-mail poll conducted by *Computerworld* last week reported easy conversions from VB6 to VB.Net using automated tools. But 20 said they either have converted only a few applications with difficulty or have not migrated their VB6 applications because of the time and expense that likely would be required.

An IT architect at a manufacturer who asked not to be identified said his company has been slowly migrating applications for two years. The effort can be so difficult that the company's developers sometimes find it's easier to just rewrite the code, he said.

Microsoft, which released VB6 in 1998, notified customers nearly three years ago that the mainstream support phase would end on March 31. Paid support options will be available for the next three years, and Microsoft will continue to provide security patches for the VB6 runtime free of charge, said Jay Roxe, a Visual Basic product manager.

Microsoft has no plans to "reopen a very old code base" and update it for modern development tasks, Roxe added. He said VB.Net gives users many benefits, including full object-oriented programming and improved ASP.Net technology for building Web sites.

But some companies don't require those improvements for all of their development work. Robert Trende, vice president of systems development at MasterCard International Inc. in Purchase, N.Y., said MasterCard's internal business-parameter management system uses VB6 on the client side of the application.

"VB6 development is cost-effective and requires far less testing than Java and VB.Net," he said. "It isn't the right tool for every application, but it is still practical for many internal system applications."

SteelFab Inc. continues to use VB6 for small applications to manipulate text and move it to Office documents. "Why port [the applications] to a new language when they work fine as they are?" said Jeff Brazzell, who works in IT support at the Charlotte, N.C.-based steel maker.

Mark Driver, an analyst at Gartner Inc., said most new Visual Basic applications are being developed with VB.Net, but he estimated that between 30% and 40% of Visual Basic developers still use VB6.

Several VB users expressed sympathy for Microsoft's position. "I don't think it's fair from a technology standpoint to expect an aging platform to be supported forever," said Christopher Pesola, associate director of application services at Learning Care Group Inc. in Novi, Mich. "This should be seen as a good opportunity to move on." He added, though, that he would like the tool for migrating from VB6 to VB.Net to be "a little more robust and user-friendly." **53120**

Continued from page 1

SAP at HP

parts and repair services across the company and has annual revenue of $2 billion. HP officials acknowledged that an aggressive schedule early on didn't allow for adequate mapping of business processes or the implementation of change management capabilities.

"The obvious object lesson is that the complexity of these projects requires even tech-savvy companies like HP to stop, slow down and make sure they are getting all the little details right," said Joshua Greenbaum, an analyst at Enterprise Applications Consulting in Berkeley, Calif. He added that "redemption is possible if you catch the mistakes before you're too far down the road."

HP launched the $110 million ERP consolidation project and rollout, dubbed iGSO, in 2002 after its acquisition of Compaq Computer Corp. The project was due to be completed this year. Instead, it will continue into 2007, according to Peter Ginouves, director of finance at the GSO unit and a leader of the project.

"Having three years to do something of this magnitude is extremely aggressive," said Ginouves. "Three years just zips by doing something of this scale." Despite the delay, Ginouves said he still expects the project cost to remain within the $110 million budget.

The GSO's project is separate from the one at HP's Enterprise Storage and Servers unit that hurt the company's third-quarter earnings last year and led to the firing of several executives [QuickLink 48806].

The goal of the GSO initiative is to consolidate 250 systems — some of them 20 years old and custom-written for HP, Compaq, Digital and Tandem systems — around a core ERP backbone based on SAP Enterprise 4.7. The existing systems also include varying instances of SAP, as well as an "alphabet soup of just about everything," Ginouves said.

To establish immediate credibility, the 350-member implementation team scrambled to do a rapid deployment in 2002, installing applications such as SAP's materials management module but linking them to HP's legacy systems. In its haste, the team neglected to focus enough on business process management and failed to craft full end-to-end workflows, Ginouves said.

By March 2004, it was clear that the project would take five years instead of three and that it "would at best break even" instead of getting the expected 35% return on investment, Ginouves said. Under HP's revised plan, it expects to gain high double-digit returns on the remaining investment of $40 million to $45 million.

"Any large changes within organizations are challenging without a good change management program," acknowledged Dan Duryea, a supply chain architect at the GSO.

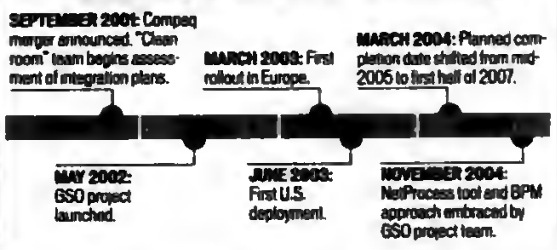
"We were essentially replacing and whittling down 250 systems, but when we were replacing them with new systems, we weren't getting anything back," Ginouves said.

After reaching that conclusion, the GSO decided to take a new approach that would include driving collaboration among business users and IT staffers to get a more thorough mapping of its business processes, he added.

HP is now using the NetProcess tool from Santa Clara, Calif.-based IntelliCorp Inc. to map complete business processes, such as procuring a part and delivering it to a customer. The resulting process models can be summarized and shared with executives or segmented into task-level detail for use by HP's programmers, said Ginouves.

Prior to adopting NetProcess last November, the project team was using PowerPoint, Word and Visio documentation tools, which didn't enable adequate communication among the employees implementing the system, he said. **53122**

The SAP Rollout at HP's GSO Unit


SEPTEMBER 2001: Compaq merger announced. "Clean room" team begins assessment of integration plans.
MARCH 2003: First rollout in Europe.
MARCH 2004: Planned completion date shifted from mid-2005 to first half of 2007.
MAY 2002: GSO project launched.
JUNE 2003: First U.S. deployment.
NOVEMBER 2004: NetProcess tool and BPM approach embraced by GSO project team.

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$170 Million Lesson

LAST WEEK, the FBI announced that its Virtual Case File project is dead. That means the $170 million spent since mid-2001 isn't buying the FBI a better way to share information among its agents about ongoing investigations. Instead, the FBI gets what we call a "learning experience."

Fortunately, the FBI *does* seem to have learned some things.

Instead of throwing even more money at the same idea — a custom-built case-handling system — the FBI is now looking at other options, such as an off-the-shelf system the FBI can buy and modify to get it working for users sooner.

The FBI is also shaking everything useful it can out of the failed project. There's an enterprise architecture in place now, and an IT road map, and technical standards. Going forward, there will be new contracting practices, along with all the user requirements and domain knowledge gleaned from this false start.

Maybe most important, once it became clear that the software delivered last December by Science Applications International Corp. (SAIC) wasn't going to do what the bureau needed, FBI Director Robert Mueller publicly pulled the plug. And it took the FBI only three months to make the decision. In big-project-killing time, that's nearly instantaneous.

Acknowledge the failure, salvage what you can from the wreckage, try a different approach next time: three good lessons for the FBI to absorb. Will they stick? We'll see.

Meanwhile, what about SAIC, the contractor that took more than three years to deliver software that didn't do the job for the FBI? Has it learned, too?

Here's one clue: SAIC won't even admit that Virtual Case File is dead, despite the FBI director's testimony before Congress. The software is still being tested, SAIC insists. It'll be three months or so before the FBI makes a decision.

Besides, says SAIC, the Sept. 11 attacks forced changes on the project's requirements. And the FBI kept changing CIOs and project managers. And what the FBI called software deficiencies were really more changes in requirements. And users kept rejecting SAIC's software designs, taking what one SAIC executive complained was a "trial-and-error, we-will-know-it-when-we-see-it approach to development."

Uh, guys? Stop tap dancing. You'll still get your money.

SAIC also says it was the one that finally convinced the FBI to give up its original big-bang grand plan and go for an incremental approach, building on legacy systems and rolling out capabilities as they became available.

No question, that's the right way to do it. Unfortunately, SAIC came up with this approach in mid-2004, three years into the project. Things should have been run that way from the beginning.

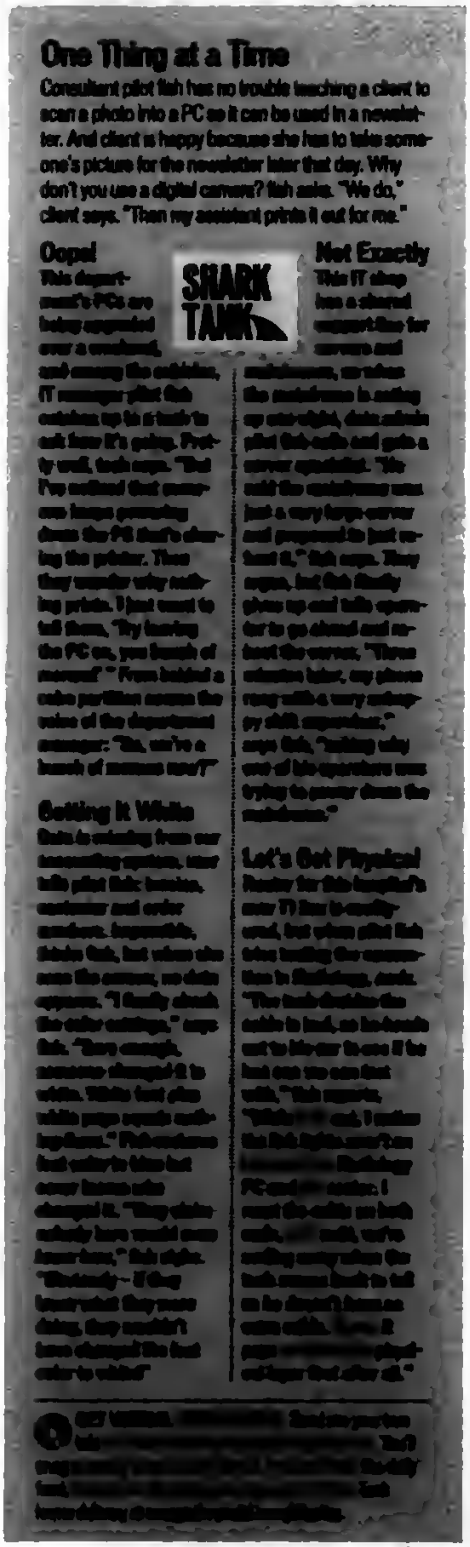
And from the beginning, SAIC should have known that a user-facing IT project today is bound to require lots of prototyping, lots of users kicking the prototypes around and lots of requirements redrafting. If the FBI didn't understand that — well, that's why the bureau hired outside experts, isn't it?

And in the frantic days after Sept. 11, SAIC should have spotted that stable requirements for this project just weren't in the cards. The FBI needed results in the face of a crisis. SAIC should have shifted gears and methodologies to start producing working deliverables right away, no matter how far the project was from a complete set of requirements.

That's not the way government IT projects are traditionally built. That approach is messy, unpredictable and sometimes wasteful. And it demands a lot from both users and contractors. No wonder both SAIC and the FBI shied away from it.

But it's an approach that delivers what's needed: results, fast and useful, in the face of the crisis instead of years later.

If the FBI can absorb *that* lesson, maybe this $170 million learning experience will turn out to be money well spent after all. 53084


One Thing at a Time
Consultant pilot fish has no trouble teaching a client to scan a photo into a PC so it can be used in a newsletter. And client is happy because she has to take someone's picture for the newsletter later that day. Why don't you use a digital camera? fish asks. "We do," client says. "Then my assistant prints it out for me."
Oops!
SHARK TANK
Not Exactly
Getting It Write
Let's Get Physical

DB2

1. Takes virtual tour of vacation spot.
2. Books flight with partner airline.
3. Dispatches service automatically.
4. Analyzes schedule data dynamically.
5. Business results reach new heights.

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